



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

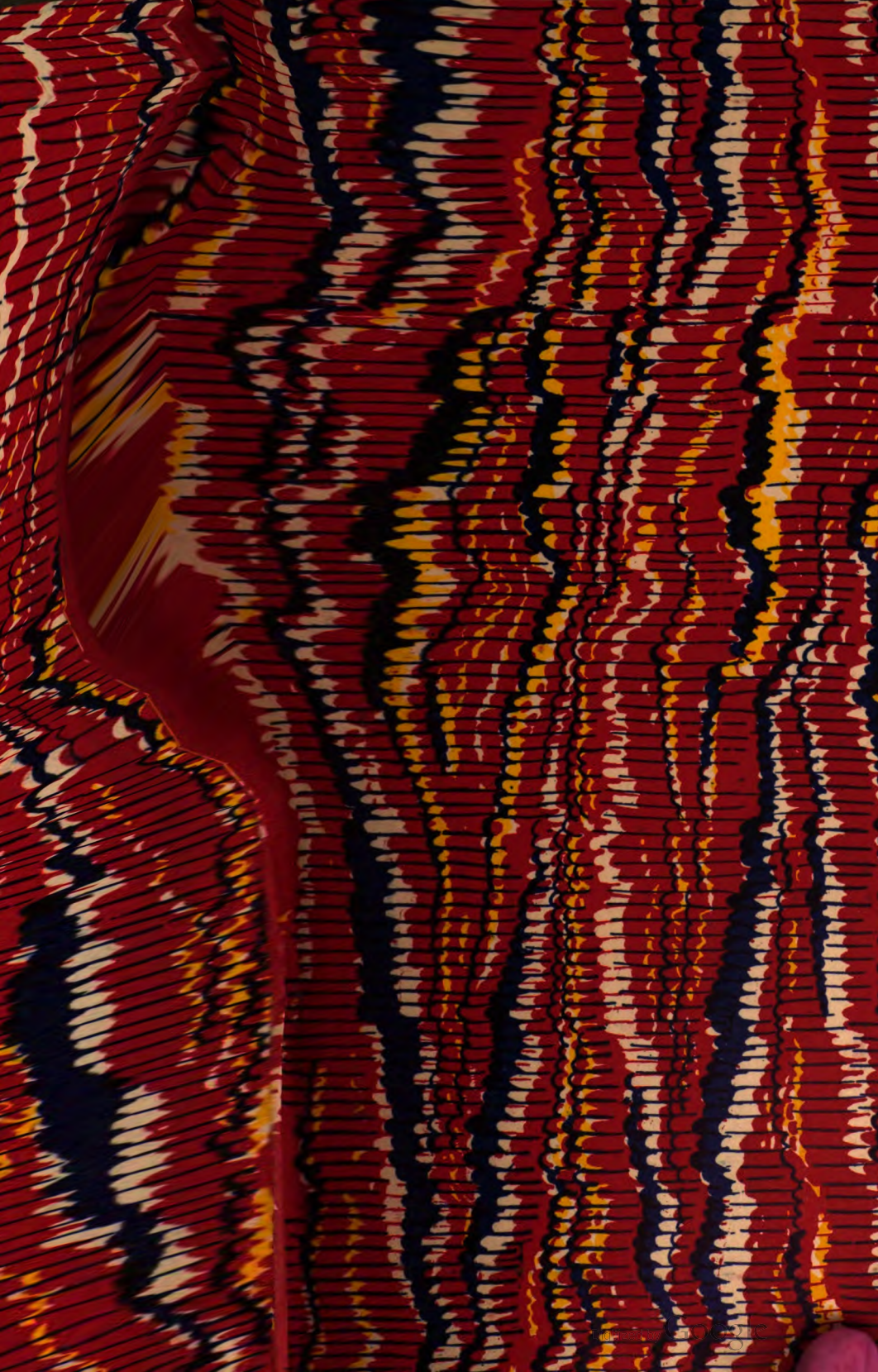
We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>







WAR EXPENDITURES

HEARINGS

BEFORE

SUBCOMMITTEE No. 1

(AVIATION)

OF THE

SELECT COMMITTEE ON EXPENDITURES
IN THE WAR DEPARTMENT

HOUSE OF REPRESENTATIVES

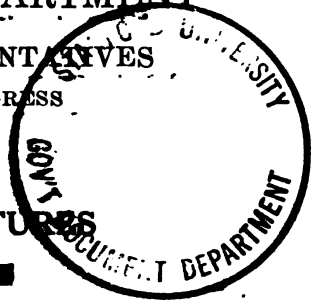
SIXTY-SIXTH CONGRESS

FIRST SESSION

ON

WAR EXPENDITURES

VOL. 1



HON. JAMES A. FREAR, *Chairman*
HON. WALTER W. MAGEE HON. CLARENCE F. I.E.A

Serial 2



WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

SELECT COMMITTEE ON EXPENDITURES IN THE WAR DEPARTMENT.

HOUSE OF REPRESENTATIVES.

WILLIAM J. GRAHAM, Illinois, *Chairman.*

JAMES A. FREAR, Wisconsin.

JOHN C. MCKENZIE, Illinois.

ROYAL C. JOHNSON, South Dakota.

C. F. REAVIS, Nebraska.

WALTER W. MAGEE, New York.

ROSCOE C. McCULLOCH, Ohio.

OSCAR E. BLAND, Indiana.

ALBERT W. JEFFERIS, Nebraska.

CLARENCE MacGREGOR, New York.

HENRY D. FLOOD, Virginia.

FINIS J. GARRETT, Tennessee.

FRANK E. DOREMUS, Michigan.

JEROME F. DONOVAN, New York.

CLARENCE F. LEA, California.

NEWTON H. SHAW, *Clerk.*

INDEX.

	Page.
"A 'Within the Law' conspiracy," by Mr. W. H. Fauber, testimony re.....	435-437
Aeronautic patent question, extracts from report of National Advisory Commission for Aeronautics.....	425-432
Aeronautical engines, table showing list of sold to United States Govern- ment.....	397
Aeroplanes:	
Aeronautical engines, table showing.....	396
Aircraft Division—	
Controversy between officers, in testimony re.....	5, 6
Disorganized condition of, testimony re.....	3-43
Organization and investigations of, testimony re.....	3-43
Allies, table showing number furnished by.....	487
American, table showing number used by.....	170
"America's munitions," by Assistant Secretary of War Crowell, testimony re.....	11, 12
Annual report of the Secretary of War on production of.....	10-12
Appropriations for production of, tables and testimony re.....	15, 16, 124, 125, 273-282, 360-397, 551-554
Appropriations for production of, testimony of Messrs. Potter and Ryan at Thomas hearings.....	65, 66
Col. Arnold, test regarding statements on aircraft production made at previous hearings.....	31, 32
Artificially dried spruce for manufacture of, testimony re method of producing.....	674-670
Austria, table showing number used by.....	170
Aviation activities abroad, testimony re.....	119-162
Aviation fields, purchase of.....	137, 138
Aviators abroad, testimony regarding number of.....	182-189, 190, 453
Aviators, testimony re casualties abroad.....	33-35, 208
Aviators, testimony re number in service.....	283-285
Aviators, testimony re training of.....	225
Belgium, table showing number used by.....	170
Bombing machines, testimony re number of, abroad.....	163-189
Borglum, testimony re criticism respecting aircraft production.....	26-31
Bristol, testimony re discontinuance of manufacture of.....	18
British Government, number furnished United States by.....	489-491
British, table showing number used by.....	170
Caproni, testimony re use of abroad.....	124, 143
Casualties among aviators.....	33-35, 208
Contracts for, testimony re in connection with activities of Col. Deeds.....	45-61
Cross-license agreement with reference to manufacture of.....	339-448
Council of National Defense, relation to aircraft production program.....	10
Crowell, Assistant Secretary of War, testimony re report on aircraft production.....	11, 12
Curtiss Aeroplane & Motor Corporation, testimony re sale of surplus aeroplanes to.....	114-118, 453-481, 520-550
Deeds, Col., testimony re business connections and qualifications.....	45-61
De Havilland—	
Advisability of concentrated production of, in United States.....	165, 166
Testimony re merit of as bombing plane.....	17, 18, 31-35
Testimony and tables re reproduction and defects in.....	17, 18, 31-43, 140-144, 175-182, 190-220, 237, 238, 246-248, 353-355, 378
Necessity for production of.....	211-216
Supply furnished abroad.....	165, 166
Delivery of, testimony re inability of firms to make.....	6, 7
Destruction of, in France.....	221-224

Aeroplanes—Continued.	Page.
Engines for, manufactured in United States	452
Engines shipped from United States and produced by allied Governments for use of United States forces	492-519
Experience of personnel of Army engaged in shaping aircraft policies	37-43
Farman, H., testimony re use of, abroad	123
Fatalities among aviators	33-35, 208
Fighting machines, testimony re number of abroad	163-189
Foreign contracts of American firms	7
French, table showing number used by	170
French Government, number furnished United States by	489-491
German types of, table showing	223
Germany, table showing number used by	170
Goethals, Gen. G. W., testimony re qualifications of in connection with handling aircraft production of	55-57
Handley-Palge, testimony re use of abroad	124, 134-137
Hispano-Suiza motors, testimony re production of	13, 37
Hughes report on aircraft production, testimony re	3, 37, 38, 57-59
Italian Government, number furnished United States by	489-491
Italy, table showing number used by	170
Liberty motor, testimony re production and defects of	35, 36, 37, 163, 166, 190-205, 216-233, 550
Liberty motor, delivery of to foreign countries	128-130
Liberty motors, equipment of foreign machines with	12, 13
Liberty motor, manufacture and installation in various types of machines	18-35
Lumber production, for manufacture of	574-667, 680-690
Manufacture of, testimony of inability of firms to	6, 7
Mexican expedition, use of in connection with	4, 5
Number and types furnished to American Expeditionary Forces	281, 496-520
Number of and types used in American Expeditionary Forces as of November 11, 1918	Following page 554
Number of abroad, testimony and tables re	66-69, 128, 163-189, 217, 453, 454
Number of aviators abroad	182-189, 551
Number on the battle front	17
Potter and Ryan, Messrs., testimony re statement of at Thomas hearings re number of aeroplanes abroad	66
Packing and shipping of	542
Parallel truss, effects of	239-241, 246-248
Patents, cross-license agreement with reference to	300-448
Pershing expedition into Mexico, use of aeroplanes in connection with	4, 5
Potter, Mr. W. C., testimony re appointment in connection with aircraft production	61-67
Prewar preparation	343-359
Price and production of lumber for manufacture of	574-627, 680-690
Production of in United States	3-43, 28-281, 554-561
Program of Mr. Howard Coffin for increased production of	9, 10
Railroad construction in connection with spruce production	691-772, 790-946
Purchase of aviation fields	137-138
Rolls-Royce engine, testimony re production of	18, 33, 34
Ryan, Mr. John D., appointment as Chief of Aircraft Production	61-67
Sale of surplus supply of	139, 140, 397, 453-486, 520-550
Shipping and packing of	562
Salvage by American Expeditionary Forces, table showing	223
Siemens-Carey-Kerbaugh Co. contract in connection with production with spruce	916-946
Societa Italia automobile (Aeroplane), testimony re use of abroad	124, 125
Spad, cancellation of contract for	199
Spad, testimony re use of abroad	123
Spruce Production Division, investigation of by Inspector General	833-840
Spruce production for use in manufacture of	87-118, 331-343, 563-946
Supply of abroad	127, 128, 163-189
S. V. A., testimony re use of abroad	124, 125

	Page.
Thomas report on aircraft production.....	3, 14 43, 65-66, 69-71
Transportation of, abroad.....	24-26
Types and number furnished American Expeditionary Forces.....	486-520
(See also Balloons.)	
Agreements, cross-license, with reference to aircraft production.....	399-448
Air Service:	
Appropriations for.....	7-9, 15, 16
Construction of stations for, table re.....	327-330
Contracts aggregating \$100 000 or over, made by, table and testimony re.....	285-325
Controversy between officers in.....	5, 6
Deeds, Col. Edward A., testimony re business connections and qualifications of.....	45-61
Disorganized condition of.....	3-43
Estimate of funds for, table and testimony re.....	36-365
Experience of personnel of.....	37-43
Inefficiency of.....	240-246, 249-257
Organization and investigations of.....	3-43
Personnel of, abroad.....	182-190
Potter, Mr. W. C., appointment to position as chief of.....	61-67
Ryan, Mr. John D., appointment to position as chief of.....	61-67
Aircraft Board, testimony re creation of.....	10
Aircraft (See also Aeroplanes.)	
Allies:	
Aeroplane engines produced by for United States forces, table showing.....	492-519
Aeroplanes furnished by, table showing.....	487
Aeroplanes used by, table showing.....	163-173
America, aeroplanes used by, table showing.....	170
American aeroplanes, types and number furnished American Expeditionary Forces.....	486-520
American Expeditionary Forces:	
Aeroplanes salvaged by, table showing.....	223
Flying officers in, table and testimony re.....	283-285
American firms manufacturing aeroplanes for foreign account, testimony re.....	7
"America's Munitions," by Assistant Secretary of War Crowell, testimony re.....	11, 12
Annual report of Secretary of War on aircraft production.....	10-12
Appropriations:	
Aircraft production, tables and testimony re.....	7-9, 15, 16, 124, 125, 273-282, 360-397, 551-554
Aircraft, testimony of Messrs. Potter and Ryan at Thomas hearings.....	65, 66
Expenditure of, table showing.....	Following page 554
Arnold, Col., testimony re statement on aircraft production made at previous hearings.....	31, 32
Artificially dried spruce, testimony re method of producing.....	674-679
Attorney General Gregory, decision regarding cross-license agreements.....	433-435
Austria, table showing number of aeroplanes used by.....	170
Aviation activities abroad, testimony re.....	119-162
Aviation, appropriations for, table and testimony re.....	7-9, 15, 16, 124, 125, 273-282, 360-397, 551-554
Aviation fields, testimony re purchase of.....	137, 138
Aviation forces abroad, testimony re.....	163-190, 283-285, 453
Aviation preparation before the war, testimony re.....	343-359
Aviators:	
Deaths among, abroad.....	33-35, 208
Duty abroad, table showing number on.....	551
Fatalities among.....	33-35, 208
Feeding of, in Italy.....	121
Number of, abroad.....	182-190, 551
Training of.....	120-124, 225
Baker, Hon. Newton D., testimony re:	
Aeroplanes, inability of firms to manufacture and deliver.....	6, 7
Aeroplanes, production of.....	3-43
Aircraft appropriations.....	7-9

	Page.
Baker, Hon. Newton D., testimony re—Continued.	
Aircraft Board, formation of	10
Aircraft Division, organization and investigation of	3-43
American firms manufacturing aeroplanes for foreign account	7
Appointments to positions in Aircraft Division, qualification of incumbents, etc.	45-69
Arnold, Col., testimony re statements at previous hearings on aircraft production	31, 32
Borglum, criticisms of, respecting aircraft production	26-31
Bristol aeroplane, discontinuance of production of	18
Colonial Army plan	6, 7
Copper purchases made through United Metals Selling Co.	75-87
Council of National Defense, relations to aircraft production program	10
Curtiss aeroplanes, contract for sale of	114-118
Deeds, Col. Edward A., conclusions of Judge Advocate General in case of, inserted in record	72
Deeds, Col. Edward A., business connections and qualifications of	45-61
De Havilland aeroplane, defects of	17, 18, 31-35, 41-43
Examination of, by Hon. James A. Frear re "America's Munitions," Assistant Secretary Crowell	11, 12
Examination of, by Hon. James A. Frear re annual report of Secretary of War on aircraft production	10-12
Examination of, by Hon. James A. Frear re business connection and qualifications of Col. Edward A. Deeds	45-61
Examination of, Hon. James A. Frear re business connections of Mr. John D. Ryan	72-75
Examination of, by Hon. James A. Frear re organization and investigations of Aircraft Division	3-43
Examination of, by Hon. James A. Frear re production of aeroplanes	3-43
Examination of, by Hon. James A. Frear re projects for spruce production	87-118
Examination of, by Hon. James A. Frear re purchase of copper through United Metals Selling Co.	75-87
Examination of, by Hon. James A. Frear re quantity of aeroplanes abroad	3-43
Examination of, by Hon. Walter W. Magee re supply of aeroplanes abroad	66-67
Experience of, personnel of Army engaged in aircraft production	37-43
Fatalities among aviators	33-35
Goethals, Gen. George W., qualifications in connection with handling aircraft production	55-57
Hay-Chamberlain bill	6, 7
Hispano-Sulza motors, production of	13, 37
Hughes report on aircraft production	37, 38, 57-59
Inspector General's investigation of railroad in State of Washington	103-114
Letter to, from Hon. James A. Frear, resale of surplus aeroplanes	483-484
Liberty motors, equipment of foreign machines with	12, 13
Liberty motor, structural defects in	35, 36
Mexican expedition, use of aeroplanes in	4, 5
National Cash Register prosecution in connection with qualifications and business connections of Col. Edward A. Deeds	48-52
Number of aeroplanes abroad	66-69
Potter, Mr. W. C., business connections of and appointment to aircraft position	61-67
Price and production of copper	75-87
Program of Mr. Howard Coffin for increased production of aeroplanes	9, 10
Railroad construction in State of Washington in connection with spruce production	87-118
Reber, Col., and Gen. Scriven, controversy between	5, 6
Rolls-Royce engine for aeroplanes, manufacture of	18, 33, 34
Ryan, John D., appointment to position as Chief of Aircraft Production	61-67
Scriven, Gen., and Col. Reber, controversy between	5, 6

Baker, Hon. Newton D., testimony re—Continued.	Page.
Sherman, antitrust law in connection with National Cash Register prosecution and Col. Edward A. Deeds.....	48-52
Spad aeroplane, discontinuance of production of.....	18, 19
Spruce production for manufacture of aeroplanes.....	87-118
Thomas hearing on aircraft production.....	42, 43
Transportation of aeroplanes.....	24, 26
Balloons:	
Allies, table showing number used by.....	170
America, number used by, table showing.....	170
Austria, table showing number used by.....	170
Belgium, table showing number used by.....	170
British, table showing number used by.....	170
Central powers, table showing number used by.....	170
Enemy, tables showing number used by.....	170
French, table showing number used by.....	170
Germany, table showing number used by.....	170
Number used abroad.....	170-173
(See also Aeroplanes.)	
Battle front, testimony re number of aeroplanes on.....	17
Belgium, table showing number of aeroplanes used by.....	170
Bolling Commission, organization and work of abroad.....	209-216
Bombing machines, number of abroad.....	163-189
Borglum, criticisms respecting aircraft production, testimony re.....	26-31
Bristol aeroplane, discontinuance of manufacture of.....	18
British:	
Aeroplanes used by, table showing number of.....	170
Aeroplanes supplied United States forces by.....	489-491
Bureau of Aircraft Production, appropriations and expenditures of, tables and testimony re.....	273-282
Caproni aeroplane, testimony re use of abroad.....	124, 125, 143
Casualties among aviators abroad.....	33-35, 208
Central Powers; aeroplanes used by, table and testimony re.....	163-173
Chinn, Mr. E. B., testimony regarding:	
Examination of, by Hon. James A. Frear re spruce production and Siems-Carey-Kerbaugh Co. contract.....	916-936, 939-944, 945
Examination of, by Hon. Clarence F. Lea re spruce production and Siems-Carey-Kerbaugh Co. contract.....	936-944
Examination of, by Hon. Walter W. Magee re spruce production and Siems-Carey-Kerbaugh Co. contract.....	932, 933, 942, 943
Chisholm, Mr. Wm. J., testimony regarding:	
Examination of, by Hon. James A. Frear re railroad construction and employment of soldiers in connection with spruce production.....	853-864, 871-876
Examination of, by Hon. Clarence F. Lea re railroad construction and employment of soldiers in connection with spruce production.....	864-870, 874, 875
Examination of, by Hon. Walter W. Magee re railroad construction and employment of soldiers in connection with spruce production.....	870, 871, 874
Christmas, Dr. Wm. W., testimony regarding:	
Aeroplane production.....	235-272
Aircraft Service, inefficiency of.....	240-257
Bullet aeroplane.....	242-244
De Havilland aeroplane, defects of.....	237-238, 246-248
Examination of, by Hon. Clarence F. Lea re advantages and types of various types of aeroplanes.....	235-272
Examination of, by Hon. Walter W. Magee re advantage and defects of various types of aeroplanes.....	235-258
Liberty motor and similarity to Hall-Scott motor.....	238, 239, 259-272
Parallel-truss aeroplane, defects of.....	239-241, 246-248
Clark, Col. E. V., testimony before Thomas committee re De Havilland aeroplane inserted in the record.....	190-192
Coffin, Mr. Howard, testimony re program for increased aircraft production.....	9, 10
Colonial army plan, testimony re.....	6, 7
Construction of Air Service stations.....	327-330

Contracts:	Page.
Aircraft material, testimony relating to in connection with activities of Col. Edward A. Deeds.....	45-61
Air Service for \$100,000 or over, table and testimony re.....	285-325
American firms manufacturing aeroplanes for foreign account.....	7
Cost-plus in connection with spruce production in Oregon.....	563-574, 668-673
Cross-license agreements with reference to aircraft production.....	399-448
Curtis aeroplanes, sale of.....	114-118
Handley-Paige, alleged extravagance in connection with.....	134-137
Lumber for aeroplane manufacture.....	574-626, 680-690
Siems-Carey-Kerbaugh Co., for constructing railroad in connection with spruce production.....	716-730, 756-772, 916-946
Surplus aeroplanes, sale of.....	453-486, 520-550
United Metals Selling Co., for purchase of copper.....	75-87
United States Spruce Production Corporation.....	332-336
Copper:	
Price of.....	75-87
United Metals Selling Co., purchases made through.....	75-87
Cost-plus contracts in connection with spruce-production operations.....	626-673
Council of National Defense, relations to aircraft production program.....	10
Cross-license agreements:	
Aeroplanes, manufacture of and.....	399-448
Attorney General's decision re legality of.....	432-435
Crowell, Assistant Secretary of War, testimony re report on aircraft production.....	11, 12
Curtiss Aeroplane & Motor Corporation, sale of surplus aeroplanes to.....	114-130, 453-486, 520-550
Deaths among aviators abroad.....	33-35, 208
Deeds, Col. Edward A., business connections and qualifications for position in connection with aircraft production.....	45-61, 72
De Havilland aeroplane:	
Advisability of concentrated production in United States.....	165, 166
Defects in.....	17, 18, 31-35, 131, 140-144, 175-182, 190-220, 237-238, 246-248, 353-355, 378
Necessity for production of.....	211-216
Production of.....	216-220, 353-355, 378
Supply of, furnished forces abroad.....	165, 166
Destruction of aeroplanes in France.....	221-224
Disque, Gen., testimony regarding connection with spruce production.....	748-754
Division of Military Aeronautics, appropriations and expenditures for aviation purposes, tables and testimony re.....	273-282
Dunwoody, Col., examination of by Hon. James A. Frear re work of Lockhard Commission.....	141
Edmunds, Hon. G. W., letter from Pope Yeatman re price and production of copper.....	76
Employment of soldiers in connection with spruce production.....	691-704, 853-876
Enemy, tables and testimony re aeroplanes used abroad by.....	163-173
Engines, manufactured in United States.....	452
Expenditures:	
Aviation purposes, tables and testimony re.....	273-279, 260-297
Spruce Production Corporation.....	331-343
Experience of personnel of Army engaged in aircraft production.....	37-43
Farman H. (aeroplane), testimony re use of abroad.....	123
Fatalities among aviators.....	33-35, 208
Fatalities in Air Service (tables) following page.....	556
Fauber, Mr. W. H., testimony regarding:	
"A 'Within the Law' conspiracy" written by testimony re.....	435-437
Cross-license agreement with reference to aircraft production.....	399-448
Examination of by Hon. Clarence F. Lea re cross-license agreement with reference to aircraft production.....	399-448
Feeding of aviators in Italy.....	121
Fighting machines, number of abroad.....	163-189
Financial operations of Spruce Production Corporation, testimony re.....	704-716
Flying officers in United States and American Expeditionary Forces.....	283-285
Foreign contracts of American firms for aeroplanes.....	7

Foulois, Maj. B. D., testimony regarding:	Page.
Aeroplane engines manufactured in United States.....	453
Aviation appropriations and expenditures.....	360-397
De Havilland aeroplane, production and defects of.....	353-355
Examination of by Hon. James A. Frear re appropriations and ex- penditures for aviation purposes.....	360-397
Examination of by Hon. James A. Frear re number of aeroplanes manufactured in United States.....	452
Examination of by Hon. James A. Frear re prewar aviation prepa- rations.....	343-359
Examination of by Hon. Clarence F. Lea re appropriations and ex- penditures for aviation purposes.....	382-395
Examination of by Hon. Clarence F. Lea re production of aeroplanes for American forces.....	555-561
Expenditures for aviation purposes.....	360-397
Prewar aviation preparations.....	343-359
France, aeroplanes destroyed in, testimony re.....	221-224
Frear, Hon. James A., examination of Hon. Newton D. Baker. (<i>See Baker.</i>)	
Frear, Hon. James A.:	
Examination of Mr. E. B. Chinn. (<i>See Chinn.</i>)	
Examination of Mr. Wm. J. Chisholm. (<i>See Chisholm.</i>)	
Examination of Col. Dunwoody. (<i>See Dunwoody.</i>)	
Examination of Maj. D. B. Foulois. (<i>See Foulois.</i>)	
Examination of Mr. John E. Frost. (<i>See Frost.</i>)	
Examination of Mr. Wm. A. Hyde. (<i>See Hyde.</i>)	
Examination of Mr. H. J. Lightner. (<i>See Lightner.</i>)	
Examination of Gen. Charles T. Menoher. (<i>See Menoher.</i>)	
Examination of Maj. John E. Morley. (<i>See Morley.</i>)	
Examination of Mr. Thomas B. Perry. (<i>See Perry.</i>)	
Examination of Col. Mason M. Patrick. (<i>See Patrick.</i>)	
Examination of Mr. A. A. Scott. (<i>See Scott.</i>)	
Examination of Mr. Charles R. Sligh. (<i>See Sligh.</i>)	
Examination of Col. C. P. Stearns. (<i>See Stearns.</i>)	
Letter to Secretary of War Baker re sale of surplus aeroplanes....	483-484
Statement regarding Hughes and Thomas reports on aircraft pro- duction.....	3
Statement re method of examining witnesses at hearings.....	448-450
French Government, aeroplanes supplied United States Forces by.....	489-491
French, table showing number of aeroplanes used by.....	170
Frost, Mr. John E., testimony regarding:	
Examination of, by Hon. James A. Frear re production of spruce and railroad construction in connection therewith.....	819-841, 852, 853
Examination of, by Hon. Clarence F. Lea re production of spruce and railroad construction in connection therewith.....	842-847
Examination of, by Hon. Walter W. Magee re production of spruce and railroad construction in connection therewith.....	847, 852
German aeroplanes, table showing types of.....	223
Germany, table showing number of aeroplanes used by.....	170
Gorrell, Col. E. S., testimony regarding:	
Bolling commission, organization and work of, abroad.....	209-216
De Havilland aeroplane, necessity for production of.....	211-216
Examination of, by Hon. James A. Frear re production of De Havi- land aeroplane.....	212-216
Examination of, by Hon. James A. Frear re strength of aviation forces abroad.....	175-177, 188
Examination of, by Hon. Clarence F. Lea re organization and work of Bolling commission.....	209-216
Hall-Scott motor, testimony re similarity to Liberty motor....	238, 239, 259-272
Handley-Paige aeroplane, testimony re use of, abroad.....	124, 134-137
Hay-Chamberlain bill, testimony re.....	6, 7
Hickam, Col., examination of, by Hon. Clarence F. Lea re production of Liberty motor.....	550
Hispano-Sulza motors, testimony re production of.....	13, 37
Horton, Mr. L. G., testimony regarding:	
Examination of, by Hon. Clarence F. Lea re Stems-Carey-Kerbaugh Co. contract for railroad construction in connection with spruce production.....	946

	Page
Horton, Mr. L. G., testimony regarding—Continued.	
Examination of, by Hon. Walter W. Magee re Siems-Carey-Kerbaugh Co. contract for railroad construction in connection with spruce production	945, 946
Hughes report on aircraft production, testimony re	13, 37, 38, 57-59
Hyde, Mr. William A.:	
Examination of, by Hon. James A. Frear re cost-plus contracts in connection with spruce production in Oregon	563-574
Examination of, by Hon. Clarence F. Lea re cost-plus contracts in connection with spruce production in Oregon	671-673
Examination of, by Hon. Walter W. Magee re cost-plus contracts in connection with spruce production in Oregon	668-671
Increased production of aircraft, testimony re program of Mr. Howard Coffin	9, 10
Inspector General's Investigation of railroad construction in State of Washington in connection with spruce production	103-114
Investigations, swearing of witnesses at, before select committee	691-693
Italians, table showing number of aeroplanes used by	170
Italian Government, aeroplanes supplied United States forces by	489-491
Italy, feeding of aviators in	121
LaGuardia, Hon. Fiorello H.:	
Testimony regarding appropriations for aircraft production	124, 125
Aviation activities abroad	119-162
Aviation fields, purchase of	137, 138
Caproni aeroplane, use of abroad	124, 143
Curtiss Company, contract for purchase of aeroplanes	139, 140
De Havilland aeroplane, defects of	131, 140-144
Examination of, by Hon. James A. Frear re aviation activities abroad	119-162
Examination of, by Hon. Clarence F. Lea re military duty and activities abroad	147-160
Examination of, by Hon. Walter W. Magee re appropriations for aircraft production and aviation activities abroad	125, 126, 131, 132, 146
Farman H., aeroplane, use of abroad	123
Feeding of aviators in Italy	121
Handley-Palge aeroplane, use of abroad	124, 134-137
Liberty motors, delivery of to foreign countries	128-130
Societa Italia automobile aeroplane, use of abroad	124, 125
Spad aeroplane, use of abroad	123
Student aviators, method of training	120-124
Supply of aeroplanes abroad	127, 128
S. V. A. aeroplane, use of abroad	124, 125
Lea, Hon. Clarence F.:	
Examination of M. E. B. Chinn. (<i>See</i> Chinn.)	
Examination of Mr. Wm. J. Chisholm. (<i>See</i> Chisholm.)	
Examination of Dr. Wm. W. Christmas. (<i>See</i> Christmas.)	
Examination of Capt. Eaton. (<i>See</i> Eaton.)	
Examination of Mr. W. H. Fauber. (<i>See</i> Fauber.)	
Examination of Maj. B. D. Foulis. (<i>See</i> Foulis.)	
Examination of Mr. John E. Frost. (<i>See</i> Frost.)	
Examination of Col. E. S. Gorrell. (<i>See</i> Gorrell.)	
Examination of Mr. L. G. Horton. (<i>See</i> Horton.)	
Examination of Mr. Wm. A. Hyde. (<i>See</i> Hyde.)	
Examination of Col. Hickam. (<i>See</i> Hickam.)	
Examination of Hon. Fiorello LaGuardia. (<i>See</i> LaGuardia.)	
Examination of Mr. H. J. Lightner. (<i>See</i> Lightner.)	
Examination of Gen. Charles T. Menoher. (<i>See</i> Menoher.)	
Examination of Maj. John E. Morley. (<i>See</i> Morley.)	
Examination of Col. Mason M. Patrick. (<i>See</i> Patrick.)	
Examination of Mr. Thomas D. Perry. (<i>See</i> Perry.)	
Examination of Capt. Seaton. (<i>See</i> Seaton.)	
Examination of Mr. A. A. Scott. (<i>See</i> Scott.)	
Examination of Maj. Charles R. Sligh. (<i>See</i> Sligh.)	
Examination of Col. C. P. Stearns. (<i>See</i> Stearns.)	
Statement of appropriations of aircraft production	8
Statement re method of examining witnesses at hearings	448-450

	Page.
Liberty motor:	
Advisability of concentrated production of, in the United States	165, 166
Defects in	12, 13, 35, 36, 37, 165, 166, 190-205, 216-233, 550
Delivery of, to foreign countries	128-130
Equipment of foreign machines with	12, 13
Manufacture and installation in various types of planes	18-35
Production of	12, 13, 35-37, 165, 166, 190-205, 216-233, 550
Similarity to Hall-Scott motor	238, 239, 259-272
Lightner, Mr. H. J., testimony regarding:	
Examination of, by Hon. James A. Frear, re spruce production and railroad construction in connection therewith	876-893, 901
Examination of, by Hon. Clarence F. Lea, re spruce production and railroad construction in connection therewith	894-898
Examination of, by Hon. Walter W. Magee, re spruce production and railroad construction in connection therewith	893, 894, 898-901
Lockhard Commission, investigation of aviation matters abroad, testimony re	141
Lumber:	
Price and production of, for aeroplanes	574-626, 680-690
Production for aircraft purposes, cost-plus contracts in connection with	563-574, 668-673
Spruce production and artificial drying of	674-679
Spruce Production Corporation, testimony re operations with lumber production	620-667
Magee, Hon. Walter W.:	
Examination of Hon. Newton D. Baker. (<i>See Baker.</i>)	
Examination of Mr. E. B. Chinn. (<i>See Chinn.</i>)	
Examination of Mr. Wm. J. Chisholm. (<i>See Chisholm.</i>)	
Examination of Dr. William W. Christmas. (<i>See Christmas.</i>)	
Examination of Mr. John E. Frost. (<i>See Frost.</i>)	
Examination of Mr. L. G. Horton. (<i>See Horton.</i>)	
Examination of Mr. Wm. A. Hyde. (<i>See Hyde.</i>)	
Examination of Hon. Fiorello H. LaGuardia. (<i>See LaGuardia.</i>)	
Examination of Mr. H. J. Lightner. (<i>See Lightner.</i>)	
Examination of Maj. John E. Morley. (<i>See Morley.</i>)	
Examination of Col. Mason M. Patrick. (<i>See Patrick.</i>)	
Examination of Mr. A. A. Scott. (<i>See Scott.</i>)	
Examination of Col. C. P. Stearns. (<i>See Stearns.</i>)	
Menohar, Gen. Charles T., testimony regarding:	
American aeroplanes furnished A. E. F., tables and testimony re	486-520
Appropriations and expenditures for aviation purposes	273-282
Examination of, by Hon. James A. Frear re appropriations and expenditures for aviation purposes	273-343
Examination of, by Hon. James A. Frear re expenditures of U. S. Spruce Production Corporation	341-343
Examination of, by Hon. James A. Frear re sale of surplus aeroplanes	453-486
Examination of, by Hon. Clarence F. Lea re appropriations and expenditures for aviation purposes	281
Examination of, by Hon. Clarence F. Lea re production of Liberty motors	550
Examination of, by Hon. Clarence F. Lea re sale of surplus aeroplanes	472, 479, 481, 520-550, 484-488
Examination of, by Hon. Clarence F. Lea, re types and number of American aeroplanes abroad	486-520
Examination of, by Hon. Walter W. Magee, re appropriations and expenditures for aviation purposes	281
Flying officers in United States and American Expeditionary Forces	283-295
Number of aeroplanes sent abroad	281
Number of aviators in service	283-285
Production of aeroplanes in United States	280, 281
Spruce Production Corporation, expenditures of	331-343
Training of student aviators	121-124
Milwaukee Railway Co., testimony re relation to railroad construction in State of Washington	87-118

	Page.
Morley, Maj. John E., testimony regarding:	
Examination of, by Hon. James A. Frear, re operations of Spruce Production Corporation.....	626-667
Examination of, by Hon. Clarence F. Lea, re operations of Spruce Production Corporation.....	628, 641, 667
Examination of, by Hon. Walter W. Magee, re operations of Spruce Production Corporation.....	641-658, 663-667
Muhlenberg, Maj. H. C. K., testimony before Thomas committee re	
De Havilland aeroplane inserted in the record.....	193-195
National Advisory Committee for Aeronautics, extract from report on	
aeronautic patent question inserted in hearings.....	425-432
National Cash Register prosecution, testimony re in connection with quali-	
fications of Col. Deeds.....	48-52
Number of aeroplanes abroad.....	66-69, 127, 128, 281
Number of aviators abroad, tables and testimony re.....	182-190, 283-285, 453, 454
Oregon, cost-plus contracts in connection with production of lumber	
in.....	563-574, 668-673
Packing and shipping of aeroplanes.....	562
Parallel truss aeroplane, defects of.....	239-241, 246-248
Patents, cross-license agreement with reference to.....	339-449
Patrick, Col. Mason M., testimony regarding:	
Aeroplanes, number of, abroad.....	163-189
Allies, number of aeroplanes used by.....	170-173
Allies, number of balloons used by.....	170-173
Aviation forces abroad.....	163-189
Balloons used abroad.....	170-173
Bombing machines, number of abroad.....	163-189
Central Powers, number of aeroplanes used by.....	170-173
Central Powers, number of balloons used by.....	170-173
Enemy, number of balloons used by.....	170-173
Enemy, number of aeroplanes used by.....	170-173
De Havilland aeroplane, advisability of concentrated production of	
in United States.....	165, 166
De Havilland aeroplane, defects of.....	175-182, 190-205
De Havilland aeroplane, production of.....	216-220
Examination of, by Hon. James A. Frear re destruction of aero-	
planes in France.....	222-224
Examination of, by Hon. James A. Frear re production of Liberty	
motors and De Havilland aeroplanes.....	217-233
Examination of, by Hon. James A. Frear re strength of aviation	
forces abroad.....	163-189
Examination of, by Hon. Clarence F. Lea re aviation activities	
abroad.....	207-209
Examination of, by Hon. Clarence F. Lea re aviation fatalities	
abroad.....	209
Examination of, by Hon. Clarence F. Lea re aviation forces abroad.....	167
Examination of, by Hon. Clarence F. Lea re destruction of aero-	
planes in France.....	221-224
Examination of, by Hon. Clarence F. Lea re production of Liberty	
motors and De Havilland aeroplanes.....	207-209, 216-233
Examination of, by Hon. Walter W. Magee re production of aero-	
planes.....	231-233
Fighting machines, number of, abroad.....	163-189
Foreign duty of, statement regarding.....	163, 164
Liberty motor, advisability of concentrated production of, in United	
States.....	165, 166
Liberty motor, defects in.....	190-205
Liberty motor, production of.....	165, 166, 216-220
Personnel of air service abroad.....	182-190
Spad, aeroplane, cancellation of contract for.....	190
Perry, Mr. Thomas D., testimony regarding:	
Examination of, by Hon. James A. Frear re artificially dried spruce.....	674-679
Examination of, by Hon. Clarence F. Lea re artificially dried spruce.....	667-679
Pershing expedition in Mexico, use of aeroplanes in.....	4, 5
Personnel of Air Service abroad.....	182-190
Porter Bros., cost-plus contract of, in connection with spruce produc-	
tion.....	563-574, 668-673

Potter, Mr. W. C. :	Page.
Appointment in connection with aircraft production, testimony re- garding	61-67
Business connections and qualifications for position in Aircraft Division	61-67
President. (See Wilson, Hon. Woodrow.)	
Prewar aviation preparations	343-359
Price of lumber for aeroplane manufacture	574-626, 680-690
Price of copper approved by President, statement re	77
Production of aeroplanes	3-43, 280, 281, 554-561
Production of lumber for aeroplane manufacture	574-627, 680-690, 691-946
Production of spruce for aeroplane manufacture	87-118, 331-343, 563-690, 691-946
Purchase of aviation fields	137, 138
Railroad construction in State of Washington in connection with spruce production	87-118, 626-667, 691-946
Reber, Col., testimony re controversy with Gen. Scriven	5, 6
Rickenbacker, Capt. Eddie, quotations from work relating to aviation activities abroad	196, 197
Rolls-Royce, aeroplane engine, manufacture of	18, 33, 34
Ryan, Mr. John D. :	
Appointment as Chief of Aircraft Production	61-67, 72-75
Business relations of personnel of equipment division, Signal Corps ..	69-71
Sale of surplus aeroplanes	139-140, 397, 453-486, 520-550
Scott, Mr. A. A., testimony regarding :	
Examination of, by Hon. James A. Frear re production of spruce and railroad construction in connection therewith	901-913
Examination of, by Hon. Clarence F. Lea re production of spruce and railroad construction in connection therewith	913, 914
Examination of, by Hon. Walter W. Magee re production of spruce and railroad construction in connection therewith	914, 915
Scriven, Gen., testimony re controversy with Col. Reber	5, 6
Seaton, Capt. D. S. :	
Examination of, by Hon. Clarence F. Lea, re production of aero- planes	554, 555
Examination of, by Hon. Clarence F. Lea, re packing and shipping of aeroplanes	562
Secretary of War. (See Baker, Hon. Newton D.)	
Select committee, swearing of witnesses before	691-693
Sherman antitrust law, testimony re prosecutions under in connection with activities of Col. Deeds	48-52
Shipping and packing of aeroplanes	562
Siems-Carey-Kerbaugh Co., contract for railroad construction, with spruce production in State of Washington	87-118, 626-667, 691-946
Signal Corps :	
Appropriations and expenditures for aviation purposes	273-282
Equipment Division, excerpts from Thomas report of testimony of Mr. John D. Ryan re business relation of personnel in	69-71
Aircraft Division. (See Aircraft Division.)	
Sligh, Maj. Charles R. :	
Examination of, by Hon. James A. Frear re price and production of lumber	574-626
Examination of, by Hon. Clarence F. Lea, re price and production of lumber	680-690
Societa-Italia automobile aeroplane, use of abroad	124, 125
Soldiers, employment of in connection with spruce production ..	691-704, 833-876
Spad aeroplane :	
Cancellation of contract for	199
Discontinuance of manufacture of	18, 19
Use of abroad	123
Spruce :	
Artificially dried, method of producing	674-679
Price and production of	87-118, 331-343, 563-690, 691-946
Spruce production :	
Employment of soldiers in connection with	691-704
Inspector General's investigation of railroad construction in State of Washington	103-114, 833-840

	Page
Spruce production—Continued.	
Milwaukee Railway Co., relation to railroad construction in State of Washington	87-118, 626-667, 691-946
Railroad construction in connection with	87-118, 626-667, 691-946
Siems-Carey-Kerbaugh Co., contract for constructing railroad in connection with	87-118, 626-667, 691-946
Soldiers employed in connection with	691-704, 853-876
Spruce Production Corporation:	
Operations of in connection with lumber production for aeroplanes	98-118, 626-667, 691-946
Financial operations of	704-716
Inspector General's investigation of, in connection with railroad construction	103-114, 833-840
Stearns, Col. C. P., testimony regarding:	
Contract of Siems-Carey-Kerbaugh Co.	716-730, 756-772
D. Sque, Gen., testimony re connection with spruce production	748-754
Employment of soldiers in connection with spruce production	691-704
Examination of by Hon. James A. Frear re operation of Spruce Production Corporation and spruce production	691-772, 790-819
Examination of by Hon. Clarence F. Lea re operations of Spruce Production Corporation and spruce production	760-775, 790, 816-819
Examination of by Hon. Walter W. Magee re operations of Spruce Production Corporation and spruce production	739-741, 775-790
Financial operations of Spruce Production Corporation	704-716
Production of spruce	691-819
Railroad construction in connection with spruce production	691-819
Siems-Carey-Kerbaugh Co. contract in connection with railroad construction	691-819
Spruce production and employment of soldier labor in connection with	691-704
Spruce Production Corporation, financial operations of	704-716
Swearing of witnesses at investigation by select committee	691-693
Structural defects in Liberty motors	12, 13, 35-37, 165, 166, 190-205, 216-233, 550
Student aviators, method of training	121-124
Supply of aeroplanes abroad	66, 67, 127, 128
Surplus aeroplanes, sale of	139-140, 397, 453-486, 520-550
S. V. A. aeroplane, use of abroad	124, 125
Swearing of witnesses before select committee	691-693
Tables:	
Aeronautical engines	396
Aeronautical engines sold by United States	397
Aeroplanes and engines delivered to Navy	Following page 554
Aeroplane engines shipped from United States and produced by allied Governments for United States forces	492-519
Aeroplanes in use in American Expeditionary Forces as of Nov. 11, 1918	Following page 554
Aeroplanes salvaged by American Expeditionary Forces	223
Aeroplanes sold by United States	397
Aeroplanes secured from Allies	487
Aircraft material produced and freighted in the United States during war	Following page 554
Aircraft Service, estimate of funds for	360-365
Allies, number of aeroplanes supplied United States forces by	489-491
Allies, number of aeroplanes used by	170, 489-491
Allies, number of balloons used by	170
American aeroplanes furnished American Expeditionary Forces and distribution thereof at front	486
Amounts expended from appropriations	Following page 554
Appropriations and expenditures for aircraft production	276-277, 551-554
Aviators abroad, number of	551
Balloons, number used abroad	170
Bureau of Aircraft Production, appropriations and expenditures of	276, 277
Central Powers, number of aeroplanes and balloons used by	170
Construction of Air Service stations	327-330
Contracts aggregating \$100,000 or over made by Air Service	246-325
Division of Military Aeronautics, appropriations and expenditures of	276, 277

Tables—Continued.	Page.
Enemy, number of aeroplanes used by.....	170
Expenditures for aircraft production, tables and testimony re....	273-282
Fatalities in Air Service.....	Following page 556
Flying officers in United States and American Expeditionary Forces..	284
Foreign contracts.....	Following page 554
German aeroplanes, types of.....	223
Number of aviators abroad.....	453
Signal Corps, appropriations and expenditures for aircraft produc- tion	276, 277
United States Spruce Production Corporation, contracts.....	332-336
United States Spruce Production Corporation, expenditures of.....	341-343
Thomas report on aircraft production, testimony re.....	3, 14-43
Thomas hearings, examination of Messrs. Potter and Ryan in connection with aircraft appropriations.....	65, 66, 69, 71
Training of aviators, testimony re.....	225
Transportation of aeroplanes abroad.....	24, 26
United Metals Selling Co., copper purchases made through, testimony re...	75-87
War, Secretary of. (See Baker, Hon. Newton D.)	
Washington (State), railroad construction in connection with spruce pro- duction.....	87-118
Witnesses, swearing of, before select committee.....	691-693
Yeatman, Mr. Pope, letter to Hon. G. W. Edmunds re price and produc- tion of copper.....	76

The
C
S
C
M
C

TES

WAR EXPENDITURES.

SUBCOMMITTEE NO. 1 (AVIATION) OF THE SELECT COMMITTEE ON EXPENDITURES IN THE WAR DEPARTMENT, HOUSE OF REPRESENTATIVES, *Thursday, July 31, 1919.*

The subcommittee met at 10 o'clock a. m., in the hearing room of the Committee on Indian Affairs, Hon. James A. Frear (chairman) presiding. Also present Hon. Walter W. Magee and Hon. Clarence F. Lea.

Mr. FREAR. The committee will be in order. This is our first regular hearing, and we have before us to-day the Secretary of War.

TESTIMONY OF HON. NEWTON D. BAKER, SECRETARY OF WAR, WASHINGTON, D. C.

(The Secretary was duly sworn by Mr. Frear.)

Mr. FREAR. Mr. Secretary, the Hughes investigation, of 17,000 pages, covering testimony of nearly 300 witnesses, taken over a period of five months, together with the exhaustive Hughes report, present certain findings of fact and certain conditions that appear to have been covered thoroughly by that report, which was directed to aircraft production and alleged malfeasance.

The Thomas hearings, covering several thousand typewritten pages of testimony, were also held during the war and a brief report was filed, disclosing existing conditions at that time. Both of these reports were made in August, 1918.

This committee is called upon to follow the general lines adopted by both committees, bringing the report down to date, and to present to Congress facts affecting the general aircraft situation as a basis for future legislation.

It now appears unnecessary to recall many of the witnesses heretofore examined in the two hearings, and the committee at the outset, desires to make brief inquiries regarding matters presented by the public and private investigations that have been held relating to aircraft activities during the war. For this reason the committee wishes to ascertain how far an agreed state of facts has been reached by those rendering the reports and by the officials engaged in aircraft activities.

The presence of the Secretary of War has been asked at the outset to aid us in reaching conclusions, and any further matter developed will be given whatever attention the committee deems advisable.

Mr. Baker, when were you appointed Secretary of War?

Secretary BAKER. Without seeking to be accurate as to the date, I think it was on the 7th of March, 1916.

Mr. FREAR. And your predecessor was Mr. Garrison?

Secretary BAKER. My immediate predecessor was Gen. Hugh L. Scott, who was Secretary ad interim, but who was there only a few weeks, and Hon. Lindley M. Garrison was my predecessor before Gen. Scott.

Mr. FREAR. He resigned?

Secretary BAKER. Yes, sir.

Mr. FREAR. At the beginning of the war between England and France, on the one hand, and Germany, on the other, did you know anything about the aircraft situation in this country as to the matter of preparation, or the general conditions that existed at that time?

Secretary BAKER. No, Mr. Chairman, I knew nothing about aircraft in those days. I was mayor of the city of Cleveland and my attention was directed to municipal questions entirely, and I knew nothing about aircraft.

Mr. FREAR. You knew nothing about preparations that had been made up to that time by this Government in connection with the War Department?

Secretary BAKER. No; I did not.

Mr. FREAR. When did you first become interested in aircraft activities; was it before your appointment as Secretary of War?

Secretary BAKER. No, sir; it was afterwards.

Mr. FREAR. That would be about a year prior to the entry of this Government into the war?

Secretary BAKER. Just about a year.

Mr. FREAR. When did you first assume the duties of Secretary of War—and I believe you said about the 7th of March, 1916?

Secretary BAKER. Yes, sir.

Mr. FREAR. When you first assumed the duties of Secretary of War what were the conditions at that time, so far as you know regarding aircraft?

Secretary BAKER. I can give you only the most general statement about that, Mr. Chairman, and by doing so I can show you when my attention was first drawn to the subject. The day I came down at Washington to be sworn in as Secretary of War, Villa, the Mexican bandit, crossed the border into Columbus, N. Mex., so that the first day of my secretaryship was occupied with the question that was presented by that invasion by a bandit force into the United States. Immediately, or within a very few days at least, we were all devoting our attention to the organization of the so-called Pershing expedition, a force which was organized for the purpose of pursuing, and, if possible, capturing the bandit, Villa. That organization took a week to get going, to get started, and either while we were considering that or immediately thereafter I inquired of Gen. Scott, Chief of Staff, whether we had any airplanes, thinking that airplanes would be a very considerable and suitable addition to the force of Gen. Funston, who was the department commander, for the purpose of patrolling the border, and perhaps a very good addition to Gen. Pershing's expeditionary forces.

I was told that we had a number of airplanes, a few of more or less thoroughly American type, not modified by any of the experiences of Europe, and I directed that they be sent, I think from San Diego; directed that they be sent to Gen. Funston.

My recollection is that there was an interchange of telegrams—though I can not be definite about this just at the moment—with

Gen. Funston, in which he said he thought airplanes would be of no special service in that work. If it was not the view of Gen. Funston it was the view of somebody in the War Department, but I said the airplanes ought to go there anyway, and if they could not be used otherwise they might certainly be used in observation service, and that we ought to have the use of them. They were sent. After a little while the Pershing expedition had penetrated so far south into Mexico, and it was so difficult to maintain communication with that expedition, that it was attempted to maintain communication by the use of airplanes. They were off the line of railroad, and wires were strung by the signal corps, and were frequently cut by Indians and others, and there were some static conditions which prevented the use of wireless telegraphy anything like constantly; it was occasionally used, but the sets that were sent there were truck sets, and mule sets, instead of permanent supports, so that there were times when we had to maintain communication between the United States and Gen. Pershing's headquarters by other means.

Some of the airplanes proved unsatisfactory, and some fell, and all of them proved inadequate in use, and as soon as the true situation in the War Department was called to my attention I took up with all the manufacturers of airplanes in America, immediately, the matter of producing at the highest possible speed a supply of aircrafts, with the thought in mind of equipping Pershing's forces at least with the most adequate means at that time——

Mr. FREAR (interposing). What time would it be about "at that time"?

Secretary BAKER. That must have been in March, 1916.

Mr. FREAR. Go ahead.

Secretary BAKER. At that time Gen. Squier was the chief signal officer, as he still is—no, Gen. Scriven was the chief signal officer. There had been quite recently, prior to that, quite a serious difficulty in the aircraft division of the Signal Corps. It had been presided over by Col. Reber, an officer of years of distinction, a man of great mechanical ingenuity and decision of character, and an enthusiast in the development of aircraft. Prior to my coming to Washington a controversy came up about Col. Reber, that led to his being tried by court-martial, and when I came on to Washington I found a court-martial record of 500 or 600 pages—that is, involving a court-martial or investigation into the aircraft section, which required me, in order to take up the situation, to inquire into the mechanics of aircraft construction, as I also had to inquire into the general situation. So I sent up to the signal office and had them send down an officer who was a flier and who understood things of that sort, a man now known as Lieut. Col. Jones. I waded through that record at night, while I sat up waiting for communications from Gen. Funston on the border. I sat up until 2 and 3 o'clock at night going over the matter, and I went into the Reber case, and found there was a very serious condition of disorganization in the aircraft section of the Signal Corps. Gen. Reber had been very impatient with Gen. Scriven, and had practically counseled insubordination as far as Gen. Scriven was concerned.

Mr. FREAR. Was that the character of the charges preferred against Reber?

Secretary BAKER. I have forgotten the charge, but that was one of the things, certainly, that he had counseled the young men to pay no attention to "the old man," meaning his superior officer, Gen. Scriven.

Mr. FREAR. What was the result?

Secretary BAKER. The result was that I detached Reber from the aircraft section of the Signal Corps, and I do not now remember who was put in his place, but Gen. Scriven doubtless advised who should be put in his place; and I directed that a very thorough reorganization of the aircraft section be made. There was rather temperamental behavior on the part of the young men. There was a charge that Reber was playing favorites, and one charge was that a lot of the men were allowed to draw extra pay for the flying service when, as a matter of fact, they were ground men, but they were permitted to qualify as pilots by just going up once or twice and without any real qualifications, so as to draw flying pay.

Mr. FREAR. Rather unimportant, so far as the larger affairs were concerned.

Secretary BAKER. Rather unimportant, as far as individuals were concerned, but showing a bad situation in the division.

Mr. FREAR. What was the situation as to the aircraft program at that time; or, how many machines did we have, and what was the type of machine or machines, as far as you can recall?

Secretary BAKER. I can not recall that, but a very small number, I think about 16 airplanes, but I may be wrong about that.

Mr. FREAR. All right. I just wanted to get at the general situation.

Secretary BAKER. May I add a sentence or two right there in order to get at what I think you want?

Mr. FREAR. Certainly.

Secretary BAKER. When I came to Washington the controversy had arisen in Congress as between two views of army reorganization. My predecessor, Mr. Garrison, was in favor of what was colloquially called "the Colonial Army plan," and Senator Chamberlain was in favor of another plan, and the chairman of the House committee, Mr. Hay, was in favor of still another plan. And there had been a very intense controversy about the whole subject. So that there had been no bill passed, and when I came to Washington that matter was all in the dough. I, accordingly, had to come down before the House Committee on Military Affairs and the Senate Committee on Military Affairs and advocate some kind of adjustment of the outstanding differences in order to get a bill through. The net result of the whole thing was that the so-called "Hay-Chamberlain" bill was passed. An appropriation bill was also passed, either as a part of the Hay-Chamberlain bill or at the same time. Gen. Scriven, who was then the Chief Signal Officer and detailed as head of the Air Service, came down before the House committee and argued very earnestly in favor of a larger appropriation for aircraft. I came after him, and as I recall the situation, though I have not thought of it since, I supported Gen. Scriven's views, and explained to the committee the newness of our general interest in this country in aircraft and the very great difficulty of getting airplanes in this country. I had been in communication with every known manufacturer of aircraft, and none of them could promise early deliveries

of aircraft. I supported Gen. Scriven in his request for aircraft, but no bill for aircraft had been passed before I came to Washington.

Mr. FREAR. How many factories were manufacturing airplanes at the time?

Secretary BAKER. I can not answer that.

Mr. FREAR. I mean generally, so far as you recollect, not attempting to be exact.

Secretary BAKER. I would say offhand that I saw representatives from three or four.

Mr. FREAR. And they were manufacturers of airplanes more or less for private use, but incidentally selling to the Government, although the Government market was not large enough to maintain any one of those factories; is that right?

Secretary BAKER. That is entirely so. I think it is possible that some of them had contracts with foreign Governments, but I do not know whether that is correct or not.

Mr. FREAR. That was after the war had been on in Europe about a year and a half, from August, 1914—

Secretary BAKER (interposing). That was in March, 1916.

Mr. FREAR (continuing). To March, 1916, which would be a little over a year and a half. But they were furnishing to some extent airplanes for the European service?

Secretary BAKER. I think the Curtiss people had arranged large foreign contracts. Whether others had I do not know.

Mr. FREAR. What kind of planes were they furnishing?

Secretary BAKER. To us?

Mr. FREAR. No; to the foreign Governments.

Secretary BAKER. I do not know.

Mr. FREAR. What kind were they furnishing to us?

Secretary BAKER. Training planes.

Mr. FREAR. That was the elementary training plane?

Secretary BAKER. Yes, sir.

Mr. FREAR. That was the kind of plane that Pershing had on the border, if he had any to speak of?

Secretary BAKER. Yes, sir.

Mr. FREAR. They were not of any particular value?

Secretary BAKER. They were 90 horsepower, I think, and the first new ones that we got were of the same kind. The fliers complained of them very particularly. They said, "What is the use of sending these? They are not equal to what we need." I said, "These are the first ones we had and I sent them."

Mr. FREAR. That was in March, 1916?

Secretary BAKER. Yes, sir.

Mr. FREAR. What were the first steps taken by the War Department for airplanes?

Secretary BAKER. I can not answer that. Gen. Squier will know about that, but I know we got a somewhat larger appropriation shortly after that, and got a still larger appropriation a little later, and from then on very large appropriations; but as to the details of the preparations we made following the additional appropriations, they were made in the signal or aircraft section of the department and I am not sufficiently acquainted with them to give them to you.

Mr. FREAR. Your attention was not called to those details after that?

Secretary BAKER. No, sir.

Secretary BAKER. I can not remember, Mr. Frear.

Mr. FREAR. At what time thereafter was your attention called to this aircraft situation; how long after that?

Mr. FREAR. Was it prior to our entry into the war, would you say? That was in April, 1917; have you any recollection of it?

Secretary BAKER. I have no recollection of it. I must have talked a number of times with Gen. Squiers and Gen. Scriven on the subject.

Mr. FREAR. But you have no definite recollection?

Secretary BAKER. I have the general recollection that Gen. Scriven and Gen. Squier talked to me very frequently of their plans, and of airplane conditions and requirements.

Mr. FREAR. That came from Gen. Squier and Gen. Scriven?

Secretary BAKER. Yes, sir.

Mr. FREAR. Is Gen. Scriven in the service now?

Secretary BAKER. He is a retired officer, available to be called.

Mr. FREAR. What do you remember about aircraft production that was first called to your attention? At what time and what was the character of it?

Secretary BAKER. Do you mean for this war? For our participation in this war?

Mr. FREAR. Yes, sir; at any time you examined into the matter. You spoke of the developments for Gen. Pershing's expedition into Mexico, and I want to know what you remember about it, beginning then.

Secretary BAKER. I am afraid I can not be definite as to the time.

Mr. FREAR. I am not so particular about that; I just want an idea of the situation.

Secretary BAKER. There was perfect confusion, and everybody was bringing in suggestions.

Mr. FREAR. I realize so much was on your shoulders at that time that it is pretty hard to remember the details.

Secretary BAKER. Yes, sir. You will find that after we asked the Congress for pretty generous appropriations, based upon our previous experience, and got them, we started in with aircraft—the Signal Corps, under Gen. Squier, who had succeeded Gen. Scriven as chief, started in to develop an aircraft program. While that was going on Mr. Howard Coffin came to me one day with the suggestion that a very much more smashing and pretentious aircraft program was necessary as a part of our preparation for war.

Mr. FREAR. How long after war had begun?

Secretary BAKER. I can not answer that. Mr. Coffin was a member of the aircraft committee of the Council of National Defense. His idea was that there ought to be a board that would have civilian experts on it; experts in production as well as in designing, and ought to have a military man on the committee, because they were the men who were to use the machines; and he laid out a pretty elaborate scheme, involving a very large sum of money, which he thought ought to be requested from the Congress.

Does that memorandum which Mr. Lea has give the time?

Mr. LEA. The act of May 12, 1917, appropriated \$10,800,000, and the act of June 15, 1917, appropriated \$43,450,000, and the final appropriation was \$640,000,000.

Secretary BAKER. That is accurate, I think. My memory is a little hazy on it now. But we got ample appropriations before we got the \$640,000,000 appropriation, to go along with the work.

Mr. FREAR. What you remember about the activities in aircraft program was when Mr. Howard Coffin spoke to you?

Secretary BAKER. That is the first I recollect about this large program which we later embarked upon.

Mr. FREAR. What was Mr. Coffin's position?

Secretary BAKER. Mr. Coffin was an automobile manufacturer. Also he was a member of the Advisory Commission of the Council of National Defense, and for more than a year prior to our entry into the war and prior to the organization of the Council of National Defense under the Council of National Defense act, Mr. Coffin had been expending money out of his own pocket because of his own patriotic inspiration, getting up a catalogue of the manufacturing and industrial facilities of the country, with a view of having at some one place a complete exposition of the manufacturing capacity of the

Mr. FREAR. That is, for all war purposes?

Secretary BAKER. Yes, sir.

Mr. FREAR. He had had no particular experience with aircraft prior to that time, so far as you know?

Secretary BAKER. Not that I know of.

Mr. FREAR. That matter was in Gen. Squier's hands, so far as the War Department was concerned?

Secretary BAKER. Yes, sir.

Mr. FREAR. What occurred next, after Mr. Coffin came to see you?

Secretary BAKER. My impression is—and this is only an impression—that Gen. Squier came with Mr. Coffin. I am not certain of that, however.

Mr. FREAR. That was soon after our entry into the war?

Secretary BAKER. Very soon. And Mr. Coffin and his associates, those who came with him, had worked out a program involving an expenditure of something over \$600,000,000 which, as they saw it, would produce a very immediate production of airplanes on a quantity basis, with some standardization of design, so that duplication would be impossible and unnecessary in the individual fabrication of machines. My recollection is that prior to speaking to me, Mr. Coffin had been associated with members of Gen. Squier's force and had attended a dinner in New York, given in fact by Mr. Coffin, at which they had had a very large number of newspaper men present, for the purpose of arousing public interest in a large aviation program.

Mr. FREAR. But so far as actual aviation work is concerned, Mr. Coffin, so far as you know, had had no experience; that is, he was simply enthusiastic and active in helping in every way he could?

Secretary BAKER. Exactly so. Although he was a manufacturer in large quantity of automobiles—the Hudson automobile.

Mr. FREAR. As it turned out thereafter, in the aviation program the automobile men were the ones who took the initiative, very largely; men who were engaged in automobile production were the men who became enlisted in airplane production?

Secretary BAKER. Yes, sir; they were manufacturers of gas engines, and they took the matter up.

Mr. FREAR. What did Mr. Coffin do when he came in in this advisory capacity?

Secretary BAKER. After he became a member of the advisory commission of the Council of National Defense he participated in a great many things that had nothing to do with aircraft.

Mr. FREAR. I mean, in regard to aircraft?

Secretary BAKER. In regard to aircraft, I do not remember whether the advisory commission made any recommendations or not. But I do know from the very beginning of Mr. Coffin's interest, and of his activity; and he was in constant and unbroken association with Gen. Squier and his associates in the aircraft section—I mean of the Signal Corps.

Mr. FREAR. He was interested in all of the war activities in which this country was engaged, or was he?

Secretary BAKER. Yes; he was interested in them all as a member of the advisory commission, but his principal interest was very rapidly developed and he made that his chief study, I think.

Mr. FREAR. What was he known in the real active work?

Secretary BAKER. As the result of the plan which was devised by Mr. Coffin and his associates, including Gen. Squier, a commission was appointed, known as the Aircraft Board—and I may not have its name exactly right—of which Mr. Coffin was chairman; and after quite a period of time that board undertook the whole business of centralizing the designing of aircraft, perfecting the manufacture of aircraft, developing the Liberty engine; after sending people abroad and getting cables from abroad as to what aircraft we needed in this country—the whole aircraft program, in other words, went before this board, of which Mr. Coffin was the chairman.

Mr. FREAR. Who made the appointments of the members of the board; do you know?

Secretary BAKER. I do not remember. The board was changed a number of times.

Mr. FREAR. Was Mr. Coffin the man who appointed the board?

Secretary BAKER. Oh, no; Mr. Coffin may have recommended some of his associates, but the appointing power did not rest with him. I can not remember where the appointing power was, whether it was the President or myself or the Secretary of the Navy.

Mr. FREAR. You discussed the names of the members?

Secretary BAKER. I remember discussing the names quite often, and trying to get men who were needed.

Mr. FREAR. Did you accept the names that Mr. Coffin suggested or did you yourself suggest them?

Secretary BAKER. I think we took his list, but some changes were made in them, as I recall.

Mr. FREAR. That was the initial step taken by Gen. Squier in preparing for the aircraft board?

Secretary BAKER. Yes; and the Navy was associated with them. A naval officer was appointed to the board by the Secretary of the Navy. Gen. Squier was a member of the board.

Mr. FREAR. I was interested in a statement in your report of 1918, on pages 50 and 51, and I assume, of course, you have no personal knowledge of the matter, but accepted the figures as given by some one in your department—that is, as to the accuracy of the figures in regard to aircraft production.

Secretary BAKER. Of course, that is so.

Mr. FREAR. I so imagined and appreciate that that must be the situation. On page 50 of the annual report of the Secretary of War, 1918, appears a statement of production of training planes and engines, which says:

When war was declared, the United States possessed less than 300 training planes, all of inferior types. Deliveries of improved models were begun as early as June, 1917. Up to November 11, 1918, over 5,300 had been produced, including 1,600 of a type which was temporarily abandoned on account of unsatisfactory engines.

Do you know whether that information was received?

Secretary BAKER. Yes; I only know from my habit and do not know from recollection; but in preparing to write my annual report I asked each bureau chief or head of division to make me a report of his service, and I abstracted such notes as I made of any service from such report made to me.

Mr. FREAR. Now, in the report of Mr. Crowell—and let me say that I saw this for the first time on yesterday—in the report of Mr. Crowell, in the book entitled "America's Munitions, 1917-1918," on page 253, appears a statement of aircraft production, including training planes and the advanced training machines. In that statement it appears that the primary training planes *SJ-1*, *JN-4D*, and the *Penguin* reached a total of 5,952.

Secretary BAKER. In what year?

Mr. FREAR. For the year 1918. On the other hand, your report says that up to November 11, 1918, over 5,300 had been produced, including 1,600 of a type which was temporarily abandoned. Your statement here is 5,300, and I am asking if that refers to the same statement, or do you know?

Secretary BAKER. I do not know.

Mr. FREAR. That includes Penguins and all; they do not include planes in the air.

Secretary BAKER. They are so-called grass-cutting planes.

Mr. FREAR. And your report says:

Planes for advanced training purposes were produced in quantity early in 1918; up to the signing of the armistice about 2,500 were delivered. Approximately the same number were purchased overseas for training the units with the Expeditionary Force.

Several new models to be used for training pursuit pilots are under development.

Within three months after the declaration of war extensive orders were placed for two types of elementary training engines. Quantity production was reached within a short time. In all about 10,500 have been delivered, sufficient to constitute a satisfactory reserve for some time to come.

Of the advanced training engines, the three important models were of foreign design, and the success achieved in securing quantity production is a gratifying commentary on the manufacturing ability of this country. The total production up to November 11 was approximately 5,200.

Now, referring to Mr. Crowell's statement again, which is rather more in detail, he states that the primary training planes reached a total of 5,952, which includes Penguins, at the end of 1918. The history of the production was that in the last one or two months you practically kept up the total that had been produced before, was it not?

Secretary BAKER. My recollection is that that is a fact.

Mr. FREAR. So that, of course, the primary training planes were not much more than half of that amount up to the time of the armistice. That would be a fair conclusion, would it not?

Secretary BAKER. I do not know the facts at all. I can tell you for your information that so far as the figures in my annual report are

concerned, they were checked up by the statistical division, under Col. Ayres, so that every figure in there, before I authorized it in my report, was checked up. My impression is that Mr. Crowell's report was submitted to the same body for checking.

Mr. FREAR. Mr. Crowell's statement is based upon aircraft production facts which were prepared by Col. Mixter, because the figures given are precisely the same so far as appears. If that is true not more than one-half of the planes named in your report, as I gather from it, were in actual existence at the time of the signing of the armistice. Now, Mr. Secretary, I am trying to find out whether or not that statement is correct. In your report it states as of the time of the signing of the armistice, and in Mr. Crowell's statement it takes us to the end of 1918, and the figures are approximately the same in both cases. For instance, as to the advanced training planes, the *JN-4* and *6H*, *S-4 B*, and *C*, *E-1*, and *SE-5*, which are the items, the total was 2,615 during the entire year up to December 31, 1918. The statement in your report shows there were advanced training planes of 2,500 up to the signing of the armistice. The only question was, whether or not it was based upon any actual information that was contained in your report?

Secretary BAKER. Well, it was believed to be accurate at the time, and checked up by the statistical division. Of course I had no opportunity personally to check that up.

Mr. FREAR. I understand that.

Another statement taken from page 51 of your report says:

In view of the rapid progress in military aeronautics, the necessity for the development of a high-powered motor adaptable to American methods of quantity production was early recognized. The result of the efforts to meet this need was the Liberty motor—America's chief contribution to aviation, and one of the great achievements of the war.

What is your judgment at this time as to the action of the War Department, and of those on whom the responsibility rested of preparing an aviation program, in devoting their time to the Liberty motor?

Secretary BAKER. Mr. Frear, I think it was justified and I base my belief on this fact—and I hope you will get the figures accurately from somebody though I haven't them in my mind—but at the time the armistice came we were manufacturing Liberty motors with so much greater rapidity than the British, after their three or four years were able to manufacture their corresponding motor, the Rolls-Royce, that the British, and the French and the Italian as well, looked to us to supply motors of that type. All the foreign motors of that type had a very great deal of handwork on them, and their production is limited, and necessarily limited.

Mr. FREAR. May I ask at this point what foreign machines were equipped with Liberty motors at the time of the signing of the armistice?

Secretary BAKER. I can not answer that.

Mr. FREAR. Were any of them so equipped?

Secretary BAKER. I can not answer that. We had sent a number of Liberty motors to the British and the French.

Mr. FREAR. Had they used them in any of their machines?

Secretary BAKER. I do not know.

Mr. FREAR. Was any Liberty motor ever used in any foreign machine to your knowledge?

Secretary BAKER. I do not know that. I know that the British and the French governments, when I was last in Europe, before the armistice, were eager to secure very large numbers of Liberty motors. Mr. John D. Ryan, then Assistant Secretary of War, was with me in Europe, and his time was taken up exclusively with aircraft matters.

Mr. FREAR. What kind of air machines were they wanting them for there?

Secretary BAKER. I do not know that.

Mr. FREAR. It would appear, would it not, in the reports of the English and the French Governments whether any of these Liberty motors were placed in foreign aircraft machines?

Secretary BAKER. Gen. Mitchell can tell you that and Gen. Patrick can tell you that.

Mr. FREAR. Gen. Mitchell can tell us?

Secretary BAKER. Gen. Patrick can tell you more than Gen. Mitchell about that.

Mr. FREAR. You do not know what kind of foreign machines had been adapted to the Liberty motor?

Secretary BAKER. I do not know.

Mr. FREAR. The situation in this country, and I ask you this as a question, was that the Liberty motor was started as a standard engine and the airplane was to be built around it; is that so?

Secretary BAKER. Well, I do not want to be very particular about it, but as I understand it the Liberty engine was designed for quantity manufacture by putting together the best things already of approved use; in such form that they were adapted to airplane use, and by manufacturing them in varying sizes of 4, 8, and 12, and perhaps more cylinders, they could be used by simply multiplying the unit instead of redesigning the engine. And I assume that the airplanes were to be adapted to carry it.

Mr. FREAR. It is the rule, is it not, in airplane production that the plane must be built around the engine; that the engine is the central part and the plane, so to speak, is built over it?

Secretary BAKER. I suppose that is so, but I do not know it.

Mr. FREAR. That is what I understand to be the case.

Secretary BAKER. I should think it is certainly so.

Mr. FREAR. And you felt that it was a correct procedure to go on that line of throwing all our energies into the Liberty motor?

Secretary BAKER. We did not quite do that.

Mr. FREAR. What else did you do in the manufacture of airplanes?

Secretary BAKER. We manufactured the Hispano-Suiza engines.

Mr. FREAR. How many of those?

Secretary BAKER. I can not give you the figures, but I read last night about the Hispano-Suiza engine statements of experts who had been looking into, and it was reported a very remarkable engine, and facilities for its manufacture were put up somewhere in New Jersey.

Mr. FREAR. Who had the program of manufacturing engines about this time, engines for American production, after Mr. Coffin came in?

Secretary BAKER. Primarily, Gen. Squier.

Mr. FREAR. Who acted with Gen. Squier thereafter until Mr. Coffin came in?

Secretary BAKER. Well, he had a group of officers associated with him.

Mr. FREAR. How many and who were they?

Secretary BAKER. I can give you some of their names. Col. Waldron was one.

Mr. FREAR. He was an automobile manufacturer?

Secretary BAKER. I think he was, but am not certain. Col. Montgomery was one.

Mr. FREAR. He was banker, handling automobile stocks.

Secretary BAKER. I do not know about his handling automobile stocks, but he was a banker from Philadelphia. There was a group of them, and Gen. Squier can give you a list of them.

Mr. FREAR. Were any of them aircraft men; that is, men who were acquainted with aviation, or what do you understand about that, as far as Army officers were concerned, of which there were a number?

Secretary BAKER. Capt. Virginius Clark, who was regarded as the greatest aerial dynamic engineer in the Army, was intimately associated with them.

Mr. FREAR. His judgment was well worth following.

Secretary BAKER. Well, I do not know that.

Mr. FREAR. I was just following up your eulogy of him, which I think well placed, and wanted to know whether his judgment was not well worth following.

Secretary BAKER. Well, they had conferences, undoubtedly, but whether his judgment was followed I do not know.

Mr. FREAR. Who would be in a position to overrule him?

Secretary BAKER. Gen. Squier.

Mr. FREAR. Who would Gen. Squire be apt to consult before taking action?

Secretary BAKER. I do not know. I think if you will ask Gen. Squier you will find that there were 50 or 60 men who were in close consultation about all those features.

Mr. FREAR. I think you are right, and we will get his testimony.

Secretary BAKER. There was a large group of people, and they were hunting all the expert advice they could get.

Mr. FREAR. The Thomas report was made August 22, 1918, over 16 months after the war was declared. In that report, No. 555, Sixty-fifth Congress, second session, Senate, certain recommendations were made. The report was based upon hearings held by a subcommittee of the Committee on Military Affairs of the Senate, the hearings being held in July and August, 1918. Of course, you are familiar with that, because, if I recollect, you were at the hearings.

Secretary BAKER. I was not at the hearings. I knew of the hearings; that they were going on, and I might have been present once or twice.

Mr. FREAR. I thought you were there.

Secretary BAKER. I may have testified, but was not present at all the hearings.

Mr. FREAR. Of course not. I spoke of this because of any question which may hereafter arise. Senator Thomas, Senator Reed, of Missouri, and Senator Hoke Smith, of Georgia, were the three then majority members of that subcommittee.

Secretary BAKER. Yes, sir.

Mr. FREAR. And Senator New and Senator Frelinghuysen were the then minority members.

Secretary BAKER. Yes, sir.

Mr. FREAR. They made a rather exhaustive study of the aircraft situation at that time, and held hearings throughout the country, and went into the details of the aircraft situation in quite an extended way.

Secretary BAKER. They took a great deal of time to it, and made a very voluminous record.

Mr. FREAR. Their record is to be accepted as the report of men who had given a good deal of time to a study of the situation, and as presenting an unprejudiced finding about the aircraft situation and aircraft production.

Secretary BAKER. They were members of the Senate committee, and of course any finding they make is entitled to great respect.

Mr. FREAR. The Thomas report was made August 22, 1918. That was over 16 months after the war was declared. In that report I find:

On June 8, 1917, public announcement was made that a great fleet of 25,000 airplanes was about to be created and would be decisive of the war, months before an effective army could be put in Europe.

This was about 60 days after the declaration of war, about the time Mr. Coffin came in charge as you say.

Secretary BAKER. Perhaps so.

Mr. FREAR. And the report at another place says:

On June 24, 1917, Congress appropriated \$640,000,000 to carry out the aircraft program. This fund has either been by actual expenditure, or by commitment, exhausted.

This amount was mentioned awhile ago by Congressman Lea. That was to carry out the aircraft program, and that was in addition to the \$43,000,000—and, Mr. Lea, how much before that?

Mr. LEA. \$10,800,000 prior to that time.

Mr. FREAR. Yes. The report further says:

This fund has either been by actual expenditure, or by commitment, exhausted.

That was at the time of this hearing. And it says:

A further appropriation of \$884,304,758 has been found necessary.

The next proposition contained in the statement, the Thomas report, is:

In the opinion of the committee a substantial part of the first appropriation (\$640,000,000) was practically wasted.

What would be your understanding of that?

Secretary BAKER. I think that statement is erroneous.

Mr. FREAR. In that same report—

Secretary BAKER (interposing). Mr. Chairman, I do not like to criticize the statement made by the Thomas committee, but I will say, with very great respect for the gentlemen who made it, that in my judgment they probably did not have all the evidence before them, or were misled in some of the inferences drawn from the evidence. I would like to state in connection with that finding that the Attorney General, on page 3 of his report, says—

Mr. FREAR (interposing). In his report made supplemental to the Hughes report?

Secretary BAKER. The report says:

The \$691,851,866.47 appropriated was for all aviation purposes, including many things besides building aircraft. Contracts for airplanes and motors let here and abroad it was estimated would require \$474,910,706.55. But in May last this amount had by no means been expended—

Mr. FREAR (interposing). Let me check that. "Had by no means been expended." Does he say anything about commitments at that point?

Secretary BAKER. He adds that a little later [reading]:

The actual disbursements for this purpose up to the close of the fiscal year ending June 30, 1918, were as follows:

For production in this country.....	\$106,741,490.77
For production abroad.....	25,605,074.31
For experimental and development work.....	1,697,803.19

Total.....	134,044,395.27
------------	----------------

This amount includes not only the cost of planes and motors delivered, but also large payments for special tools and for labor and materials in planes and motors not then finished.

The figures are not available to show just how much more has been disbursed on this account since June 30, though the total amount of disbursements for all aviation purposes between that date and September 30 was \$139,186,661.33.

Mr. FREAR. You have not said anything about commitments?

Secretary BAKER. No, it does not; and I thought it stated it. There were commitments, but you can hardly speak of commitments as waste.

Mr. FREAR. That is true; but after \$640,000,000 had been either pledged in commitments or expenditures had been made, the Hughes committee made an exhaustive study of this question, and the Attorney General never examined a witness, as I understand. The Thomas committee also made an examination covering a period of five months, and did examine witnesses everywhere, and that committee came to the conclusion that a very substantial part of this money had been wasted. I do not want to put you in the position, nor myself to be put in the position, of criticizing the report of Mr. Hughes or the Attorney General, or the Thomas report, but these gentlemen who had been making a very careful investigation, and had examined not only the records of all the larger plants, but had examined witnesses to determine where the waste had taken place, they brought in that report. Do you think it entitled to reasonable acceptance—because the Attorney General, mind you, has not made any statement in regard to details.

Secretary BAKER. Let me say to you, Mr. Chairman, that not by taking out a report made by somebody and attempting to determine the situation can you get at the facts, but the facts in this case are reasonably ascertainable; they are all matters of record. Whether the Thomas committee got them all or not, or drew correct inferences, is beside the mark. The facts are easily obtainable. The Thomas committee may have thought that some money was wasted, and they may be right or wrong on the basis for their judgment, but I can not comment upon its accuracy.

Mr. FREAR. I think that is a fair answer. The Thomas report says, and makes this specific point:

We have not a single American chase (attacking plane) upon the battle front.

That was in August, 1918, wasn't it?

Secretary BAKER. Yes; but I can not tell you about that.

Mr. FREAR. Continuing to quote from the Thomas report:

We have not a single American-made heavy bombing plane upon the battle front.

Secretary BAKER. I do not know about that. We have had some De Haviland planes.

Mr. FREAR. Do you say they were satisfactory bombing planes?

Secretary BAKER. They were used as bombing planes.

Mr. FREAR. Only because of absolute necessity.

Secretary BAKER. It is perfectly true, I think, although I am not an expert, that by the time we got the De Haviland planes they were practically obsolete.

Mr. FREAR. Wasn't it true that the De Haviland plane was not a bombing plane because it could not be used for that purpose because of the time it took to rise to the ceiling, taking three-quarters of an hour to rise 15,000 feet?

Secretary BAKER. I do not know about that.

Mr. FREAR. The total amount of gasoline that it could carry was only approximately 75 gallons and it used about 35 gallons an hour. In other words, it would take three-quarters of an hour to reach the ceiling to start out on its bombing expedition, and it had then consumed that much time—three-quarters of an hour—and its total oil or gasoline capacity was two hours, and for that reason it was not acceptable and could not be used as a bombing machine in daylight.

Secretary BAKER. Mr. Frear, I think I have talked with more people about airplanes, probably, than I have talked to on any other subject. And I have talked with more people about the De Haviland 4 airplane than on any other subject, and the divergences of opinion are radical and seem to be somewhat personal. I talked in Europe with flyers and I have talked in America with flyers, and have found some who were enthusiastic on the De Haviland 4, and have heard criticism of that machine. I have heard people say that those criticisms are all more or less irrelevant and immaterial.

When I went abroad with Mr. Ryan he was especially interested in aircraft, and he went up to the front where the squadrons were, although I did not because I had other things to do; but he went up there and reported that there was a very great deal of enthusiasm for the De Haviland 4; that it had been found to have so much speed that it could be used with flying squadrons as well as for the purpose for which it was designed. This is also true, that the De Haviland 4, to be kept in production in order to have the most capable machines would actually be replaced by other machines which we had in production, in quantity production; and according to Gen. Mitchell's testimony before the Appropriations Committee, and which was in harmony with what he told me when he got back to this country from France, he was amused to find—or I should say pleased to find—that the design and production in machines we were planning to send over were better than any type that he had seen abroad.

Mr. FREAR. And, he added, would have been worth a year if we could have gotten them there?

Secretary BAKER. Yes, sir; absolutely true.

Mr. FREAR. I do not want to forget this matter; this discussion arose because of the statement in the Thomas report that there was not a single bombing plane at the front, and as I gave you the testimony of experts, and I ask to be corrected if there is any mistake in the statement—that it requires 48 minutes or 45 minutes—48 minutes is given as the figures—for one of the De Haviland 4s to rise to its ceiling, 15,000 feet, and that the oil capacity, or gasoline capacity, would only carry it two hours. I ask if that statement is correct?

Secretary BAKER. I do not know.

Mr. FREAR. I am not asking you as an expert, but if you have heard that discussed I would like to know about it?

Secretary BAKER. I have heard it discussed, but do not know the facts. Gen. Squier will be able to give it to you without difficulty.

Mr. FREAR. He will?

Secretary BAKER. Yes.

Mr. FREAR. Then, we will not waste any more time with that.

Secretary BAKER. If he can not, Gen. Mitchell can, because he is acquainted with those machines.

Mr. FREAR. I will continue reading from the Thomas report:

We have not developed and put in quantity production a successful chase or fighting plane.

Our attempt to create a fighting plane was centered in an attempt to adapt the Bristol fighter and De Haviland to the Liberty motor. The Bristol was, without successful tests, put in quantity production, over \$5,500,000 expended, and the lives of several gallant men sacrificed, when the machine was condemned and its manufacture discontinued.

Secretary BAKER. I think that is true; that experiments with the Bristol was a failure and that the money expended in it was wasted, if failure is a waste.

Mr. FREAR. I will continue to quote from the Thomas report:

The Standard J was equipped with the Hall-Scott engine and put in quantity production. After more than 1,200 had been manufactured at a cost of \$6,000,000 the machine thus equipped was condemned as dangerous and placed in storage.

I assume that is correct?

Secretary BAKER. I do not know about that.

Mr. FREAR. That is contained in the Thomas report.

Secretary BAKER. The Bristol machine case I had called to my attention. The Standard J training machine I did not have called to my attention.

Mr. FREAR. That was because there was an attempt to place the Liberty motor in the Bristol machines, and it was not adapted to it, like the Rolls-Royce, for which machine it was used—no; I think it was used in the De Haviland—but the Liberty motor was a new engine that was used in the Bristol machine and it was found it would not work.

Secretary BAKER. I do not know about that.

Mr. FREAR. The report of the Thomas committee says:

Spad is a chase or fighting plane of the highest type. Early in September, 1917, an oral order was given to the Curtiss Airplane Co. for the manufacture of 3,000 of these machines. Work was at once begun and drawings practically complete * * *. On September 27, 1917, Col Clarke * * *.

He is the gentleman you referred to awhile ago, I understand?
Secretary BAKER. Perhaps so.

Mr. FREAR. And the report goes on to say:

Maj. Vincent (an inventor of the Liberty motor) concluded that the machine could not be operated with a Liberty motor.

Secretary BAKER. That is, the Spad.

Mr. FREAR. Yes; that brings it back to the same position mentioned, just like the Liberty motor. [Reading:]

On October 8, 1917, the contract was canceled, the reason given being that a single fighter was regarded as obsolete. But the fact is that on April 23, 1918, a contract was let to the Curtiss Co. to build 1,000 single-seater fighters, known as the SE-5, which is the English equivalent of the French Spad.

In other words, six months' delay occurred in putting into manufacture the Spad, which was the machine that was being used on the front in France right up to the time of the armistice. Was there any explanation given for that?

Secretary BAKER. I have not any explanation, and I do not know about that. I do know that the British and the French and the Italian fliers were here as a part of Gen. Squier's counsel; he had an international counsel, and the best judgment of the best experts was sought in that matter, but why they changed from one to another I do not know.

Mr. FREAR. The Thomas report further states:

"Our Government is now using upon the battle front"——

And that means August 28, 1918.

"every Spad machine it can secure from the French, but has been able to obtain only 418 of them."

I suppose you do not know the condition of those Spads turned over by the French Government?

Secretary BAKER. No.

Mr. FREAR. I quote further.

"The cancellation of the Spad contract and the failure of the Bristol, left us without a single or two-seater fighter."

Do you know anything about that?

Secretary BAKER. I do not know those facts at all.

Mr. FREAR. I read on:

Contracts for 8,500 De Haviland 4s were let at various times. Up to August 1, 1918, 1,000 had been delivered and a number forwarded to Gen. Pershing.

It does not say how many had been forwarded but I suppose those had been delivered in this country?

Secretary BAKER. As to the date I do not know about that.

Mr. FREAR. Continuing, the report says:

An inspection and tests developed numerous mistakes, both in design and workmanship. Work on the planes was stopped until the defects could be remedied.

As early as October, 1917, we were in possession of the necessary facilities to construct the Caproni, a powerful and successful heavy bombing plane, approved both by Italian and English aeronautical engineers. * * * Expert Italian engineers have been upon the ground since January, 1918, yet the fact remains that we have up to date constructed only one experimental machine, which is equipped with Liberty motors. * * *

I do not suppose you have any knowledge of the fact; that would be known by Gen. Squier?

Secretary BAKER. Undoubtedly; both the fact and the reasons for it Gen. Squier would have.

Mr. FREAR. I did not know whether Gen. Squier had ever given you any explanation of it.

Secretary BAKER. Some one gave me this explanation, and I do not know who gave it, that it was decided very much wiser for us not to attempt to make the latest model planes that were used in fighting, but to buy these from the French and the British, who were developing them as they went along, and it was thought advisable for us to use the elementary plane on this side.

Mr. FREAR. Machines that were being used over there?

Secretary BAKER. I can not answer that. Those telegrams Gen. Squier has and they are all a matter of record.

Mr. FREAR. I am making a record here, and you need not assume that I am expecting any answers on matters you do not know.

Secretary BAKER. I want it to appear in the record that details of those things were never even brought to my attention. I was consulted about matters of policy, and sat in with them on matters of policy, but it never occurred to me that I could design an airplane, or pass expert opinion on them, whether we should have one kind or another.

Mr. FREAR. Do not you think, in view of the report given by Mr. Hughes in regard to Gen. Squier, who was at the head of that organization, that you might have been as well equipped to have passed upon it as the man in charge?

Secretary BAKER. Quite the contrary. Gen. Squier is a man of the very highest scientific information, and whereas it might well be that Gen. Squier, having a very great deal to do, may not have been as good an administrative officer as was desired, yet his knowledge of the science of aerial navigation is second to none in the world.

Mr. FREAR. Was anybody else appointed, either as Gen. Squier's successor, or during his incumbency of the office, because of scientific attainment or ability to administer matters from an administrative standpoint?

Secretary BAKER. If you speak of administrative responsibility, I would say no.

Mr. FREAR. That was one of the important things at that time, and when recommendations came from abroad that we should proceed to get foreign planes in order to supply ourselves, they ought to have had immediate and proper attention.

Secretary BAKER. Those recommendations came from our men abroad, and they knew nothing, on the other side, as to manufacturing possibilities on this side. If a man in France sends word to go into quantity production on a certain plane, the people on this side know whether we can go into it and how well our people may be prepared for rapid production; they know best about that. Gen. Squier had around him the best French, British, and Italian experts those Governments could let us have, and the best experts we had, out of private business and out of the Army, and experts in production, and experts in business, and they were in constant conference, trying to respond to the obvious need on the other side.

Mr. FREAR. Would you say that Gen. Squier, confining his operations practically to the Liberty motor, acted on his own judgment or upon the advice of experts from France, Italy, and England, or experts here?

Secretary BAKER. I have not the least doubt that Gen. Squier took counsel in the matter and advised with them about it.

Mr. FREAR. And attempted no construction of planes according to the recommendations of our men whom you sent abroad on the Bolling Commission, and who asked for quantity production of machines they found there and were being used by American and European fliers?

Secretary BAKER. I can not give you information about that.

Mr. FREAR. I was asking simply to let the record show the situation.

Secretary BAKER. Gen. Squier will be able to give you how he reached those recommendations, and the results of the conferences, and the reasons therefor.

Mr. FREAR. We have it as a fact that he was a scientific gentleman who was among the first.

Secretary BAKER. Not only a scientific gentleman but a man of very large experience.

Mr. FREAR. So Gen. Squier, at the head of that department of the Government, when we were engaged in war and had been engaged for 16 months, and had failed to get a single bombing plane or a single fighting plane across the seas, would you say that he had exercised the judgment and experience that ought to have been exercised, when the English and the French had their planes there constantly in use?

Secretary BAKER. I am not in a position to criticise Gen. Squier.

Mr. FREAR. It is the purpose of this committee, of course, to ascertain where the responsibility rested for failure to get airplanes over there.

Secretary BAKER. Exactly; and if any responsibility attaches to Gen. Squier I feel quite sure he would want it to be put on him. But this was a very new art, a very difficult art, a changing art; it was not merely difficult and new as to its design and engineering, but it was difficult and new as to manufacture.

Mr. FREAR. What are you referring to?

Secretary BAKER. I am referring to the airplane art.

Mr. FREAR. But we had an advantage which foreign governments had not had—of knowing what Italy had done, and knowing what Germany had done, and knowing what France had done, and knowing what England had done, and what we were doing at the time, and yet for a year and a half, or nearly that time, we failed to get a single fighting plane to France?

Secretary BAKER. Yes; and yet I am told by persons who are skilled in industrial enterprises that reproduction in quantity of a thing of very simple design which somebody else is already making, is, in itself, a very difficult industrial organization problem. Take, for instance, the case of rifles, which looks like a comparatively simple device, the modern or modified Enfield or Springfield rifle, of comparatively well-known design, and yet I have had men very high in industrial organizations to tell me that it would require many months to place the Springfield rifle, as manufactured in the Rock Island or other arsenals, in a private factory and get them to producing them in quantity.

Mr. FREAR. But here were machines that were being used abroad, and it was necessary to give our men something and give it to them

at once. Considering the matter of rifles, to which you have referred, I would say under such conditions that we would give them muzzle-loaders, we would have done anything in order to place weapons in the hands of our fighting men. If we could not have put any of the modern Springfield rifles into their hands we would have given them something else to fight with. But returning to the matter of airplane production, it would seem that Gen. Squier and others devoted their attention practically to the Liberty motor, as he states in his testimony that no effort at production of these various machines abroad, various airplanes that were being used in actual battle, had been made up to that time.

Secretary BAKER. Well, I do not know that that inference is justified. They sent commissions abroad, and the French and British agreed to furnish us airplanes out of their manufacturing facilities which were already manufacturing them; and we authorized our people abroad to buy from the British and the French as fast as they could be produced.

Mr. FREAR. Yes; but they were engaged in furnishing their own armies.

Secretary BAKER. Yes; but ultimately they supplied us with a good many. The question is, whether it would have been better to have taken the best of the French and British models at that time and try to produce them in the United States instead of trying to get anything new. That is a question of judgment on which I am not competent to pass.

Mr. FREAR. All right. I am reading from the report:

In the opinion of the committee the disappointing results above set forth are chiefly due to three causes:

1. That the airplane program was largely placed in the control of great automobile and other manufacturers who were ignorant of aeronautical problems.

2. These manufacturers undertook the impossible task of creating a motor which could be adapted to all classes of flying craft. It is not too much to say that our airplane program has been a failure due largely to the Liberty motor.

3. We failed at the beginning of the war to adopt the common-sense course of reproducing the most approved types of European machines in as great numbers as possible. This should have been carried on coincident with the production of the Liberty motor. This sound policy has very recently, but after a lamentable lapse of time, been adopted.

The mistakes and errors referred to would probably have been largely avoided if the aircraft program had been under the control of one man, assisted by skilled aeronautical engineers and practical flyers to design and test our machines, with production made subordinate to them.

This report was signed by Senator Thomas, Senator New, Senator Reed, Senator Smith, and Senator Frelinghuysen, who had made a thorough investigation and examination throughout the country. That report at least is entitled to some weight in view of the fact that they made a very thorough investigation and examination and that was their finding. Furthermore, it certainly was not based upon any political desire to criticize the administration; that could not have been possible because of the personnel of the subcommittee if nothing more. That would be true, wouldn't it?

Secretary BAKER. It is quite incredible that there was any political motive in anything that anybody has done about this.

Mr. FREAR. Gen. Squier was the officer in charge, as you have stated. Gen. Squier's attitude is arrived at by his own statement before the Committee on Military Affairs of the Senate of January

30, 1918, over nine months after the declaration of war. On page 2119, part six, of the hearings, he makes this statement, which I quote from that hearing:

We had to make a momentous decision way back in April (1917) when we decided to make the Liberty motor. We probably made the biggest decision we will ever have to make. We had thrown the die. I think we did it right. We had to decide whether we would go over to England and get those planes and engines * * * and try to produce them or pool everything we had * * * and have standardized that we could get in quantity. That decision was taken boldly, and I think it was a very wise one, Mr. Chairman. It was what resulted in the Liberty motor.

Is that your judgment?

Secretary BAKER. That was my judgment at the time and still is my judgment.

Mr. FREAR. That everything ought to have been pooled for the Liberty motor; that all our efforts should have been centered on that, which necessarily prevented the manufacture and production of other machines that we were called upon from abroad to send over there.

Secretary BAKER. Well, I do not know enough about airplanes to say that is my judgment, but this is my judgment: That not knowing how long the war would last, and having no possible way of fixing its termination, it was wise at that time to devise an engine, whether by modification of existing engines or otherwise, adapted to American methods of quantity production.

Mr. FREAR. We will all concede that, but that is not the question. The question is, whether all our activities should have been centered on that?

Secretary BAKER. Of course, if we had brought the Rolls-Royce engines over here and attempted to make them, with the large amount of handwork on it, it would have been slow, tedious, and next to impossible under American methods of production.

Mr. FREAR. Even so, if we could have produced 200 of them, or 500 of them, it would have been filling in the gap so far.

Secretary BAKER. So far but almost negligible in results.

Mr. FREAR. Would it, in view of the fact that we were unable to get hardly a pursuit plane at the time of the armistice?

Secretary BAKER. If we had made a single pursuit plane, or a few pursuit planes, they would have been valuable, of course, in proportion to their number. But if we had made them by dividing up a little energy, when a little later we would have produced many more, that presented a situation where it was thought advisable to wait.

Mr. FREAR. There were a number of plants that were not utilized, as shown in the Hughes testimony?

Secretary BAKER. Yes, sir.

Mr. FREAR. We could have proceeded right along without interfering with the Liberty motor.

Secretary BAKER. Yes, sir; that is possible.

Mr. FREAR. The Singer plant might have been used?

Secretary BAKER. The Singer plant would have been for the manufacture of planes and not of engines.

Mr. FREAR. There were other plants that could have been utilized for the manufacture of engines as well?

Secretary BAKER. I think that is true.

Mr. FREAR. Gen. Squier says:

"The Liberty motor was in existence and being tested long before that bill was passed."

Which bill was passed in July, 1917. And he goes on to say:

"Although its evolution depended upon that bill."

And yet its evolution did not reach any state of perfection until shortly before this hearing was held, in August, 1918.

Secretary BAKER. It was in constant process all the while.

Mr. FREAR. At that hearing Gen. Squier said:

I think we shipped no training machines to France at all.

Then again, in answer to a question propounded by Senator Weeks Gen. Squier said:

Yes, sir; to what extent I do not know. I do not mean to say that it has been decided they will do it, but it is looming in the horizon that we may be producing more than we can get across, and thereby be upsetting industry. That is a matter, of course, that is not for me to discuss.

Secretary BAKER. That is a matter of very easy explanation, if there is any question about it at all. The aircraft program, when it finally did get on its feet and started to running, threatened to absorb more of the transportation facilities than were available.

Mr. FREAR. This does not refer to transportation facilities.

Secretary BAKER. This says "get across."

Mr. FREAR. This says, "and thereby be upsetting industry."

Secretary BAKER. Well, there are two ideas in that. We were very much disturbed, the whole selling group, about dealing with the transportation questions—as to how we were ever going to land in France engines and planes which the aircraft division told us would be available as the months went by. The results were stupendous. There were submarine troubles, which were more or less serious, and we had to feed the Army. While we were buying abroad, making very large purchases abroad, it was evident that we would have to increasingly rely on America for food, clothing, and things of that kind. As to the manufacture of powder in this country, for ourselves as well as for our Allies, inasmuch as the transportation of one pound of powder requires the transportation of 7 pounds of ingredients that go to make up the powder, just taking powder as an illustration, it was thought very much more economical for us to manufacture powder in this country instead of sending abroad the ingredients for it to be manufactured there. So that one of our grave problems was the transportation problem.

Mr. FREAR. That had not been reported here.

Secretary BAKER. What problem?

Mr. FREAR. The transportation problem.

Secretary BAKER. Gen. Squier says there—

Mr. FREAR (interposing). He speaks of upsetting industry.

Secretary BAKER. Senator Weeks asked him whether it was proposed to act upon the manufacture of airplanes, and Gen. Squier said no decision had been reached on that point. But it had been discussed, because we were then about to manufacture them on a scale which we feared we could not transport them across the sea. Naturally, it would be idle to manufacture what we could not get across. Though we were considering the question he had made no decision on it.

Mr. FREAR. Gen. Squier's general understanding of this method of transportation, to which you refer, is evidenced by his statement in the same hearing, in which he said:

"They prepared machines for shipment * * *

No; that is not it. But he says he does not know who determined the shipments; "thinks the Chief of Staff refers it to some council or some committee."

Secretary BAKER. I know that that is not a fact. Gen. Squier was simply not advised about it. Transportation abroad was solved in this fashion: Gen. Pershing was the commander in chief of the expeditionary forces. He was the only person who could tell us what he needed, whether men, and if so, what kind of men, what sort of training; whether he needed supplies, and if so, what sort of supplies. Gen. Pershing made what is known as a priority list, and his staff over there cabled us page after page of priority list, indicating what they needed first, and the quantity; and sometimes they put in things that we did not have, and we cabled back that we could not supply those as yet, and would ask what they wanted in place of them. That priority list changed as the exigencies of the situation changed. Gen. Pershing was the man who determined whether he wanted airplanes or ammunition or rifles or bacon.

Mr. FREAR. Do you know whether Gen. Pershing ever sent word over here that he did not want airplanes, at any time?

Secretary BAKER. Of course not.

Mr. FREAR. There was no question of priorities when it came to airplanes, as to whether he needed airplanes?

Secretary BAKER. I do not know about priority, but they were needed, of course.

Mr. FREAR. You admit that he had the authority, and that he acted upon any shipment of airplanes?

Secretary BAKER. I do not say he had the authority. He had the duty to advise us here, and we had the authority to determine, and we determined in the exercise of our authority how many of the things he wanted were available.

Mr. FREAR. Do you recollect at any time that he suggested airplanes should be put low on the priority list?

Secretary BAKER. I can not answer that. But the priority lists can be produced, and his judgment will appear. That priority list changed. For instance, at one time the French Government offered to sell Gen. Pershing 50,000 to 100,000 horses. Horses being a very bulky object for transport, because we have to build stalls for them, we took some of the horse ships and had the stalls taken out of them, had the ships changed into cargo ships, and then the French Government could not furnish us horses, and we had to put the stalls back in them again. So, the priority list was changed from time to time.

Mr. FREAR. We realize that your labors have been heavy.

Secretary BAKER. I would not make any plea on that. I merely wanted to explain Gen. Squier's statement.

As to industry, we had a steel shortage in the United States. We had a board, known as the War Industries Board, which sat on the question and apportioned steel. Nobody could get a pound of steel unless his need was apparent for such a thing. While the end was most urgent, as Gen. Squier meant to say, if we would be making

more airplanes than we could get across the ocean, we would have steel tied up when it might be used for something else.

Mr. FREAR. Did you at any time stop quantity production of airplanes because of this difficulty of transportation?

Secretary BAKER. So far as I know, we never did.

Mr. FREAR. That is my understanding.

Secretary BAKER. But of course there was the imaginary objection, because we might have gotten to the situation that we expected. Or I would not say that it was an imaginary objection but a question of prudence and forethought.

Mr. FREAR. It was an imaginary objection so far as actuality is concerned?

Secretary BAKER. It was a moot question.

Mr. FREAR. The first investigation that was conducted in regard to this aircraft situation came out when the failure to get production was commented upon by Mr. Borglum. That is the first one that I have had my attention called to.

Secretary BAKER. Well, the Borglum criticisms were among the most insistent, and those that led to the most activity, perhaps.

Mr. FREAR. I am quoting from one or two answers that he gave in the Hughes hearings, and will be glad to get your own judgment upon some of these things. He says, for instance:

"Mr. Deeds told me * * *."

I suppose he was afterwards Col. Deeds. You have not mentioned Col. Deeds, who was with Gen. Squier, was he not?

Secretary BAKER. Yes, sir.

Mr. FREAR. He was in some cases supposed to be the principal one.

Secretary BAKER. Yes; perhaps he was.

Mr. FREAR. He says, and I am quoting from page 367 of the Hughes testimony:

"Mr. Deeds told me that he was going to seek a place on the Aircraft Board."

That indicates that Mr. Deeds, early in the month of May, 1917, shortly after the declaration of war, was expecting to get upon the Aircraft Board and become one of the factors here in the decision of what should be done, where the manufacture should take place, and other conditions regarding aircraft production, does it not, or what is your idea?

Secretary BAKER. Of course, I know nothing about Mr. Borglum's testimony.

Mr. FREAR. I understand that no one has ever disputed it, or if so, I will be glad to have the correction.

Secretary BAKER. I would not undertake to correct it. I simply know nothing about it.

Mr. FREAR. Again Mr. Borglum says:

Mr. Ford said that either Kettering or Vincent stated to him that they literally placed the motors or the cylinders so that no other system could go in there.

That is, so that no other ignition system could be placed in the airplane.

Secretary BAKER. That has to do with the use of the Delco ignition system.

Mr. FREAR. Yes; that was true of the Liberty motor, that it was impossible to use any other ignition system except that.

Secretary BAKER. I have heard that.

Mr. FREAR. And that was the company with which Mr. Deeds, afterwards Col. Deeds, was connected?

Secretary BAKER. That charge was made by Mr. Borglum and investigated by Mr. Hughes.

Mr. FREAR. And he found 20,000 Liberty motors with the Delco ignition system, but the system was not used on any other engine?

Secretary BAKER. I do not know about that.

Mr. FREAR. Mr. Borglum made this further statement in that record:

Mr. Trego, of Connecticut, had a very excellent motor. He was called to Washington, and you know what he stated here. He got a three and a half million dollar contract. He said he would make a million and five hundred on it and he began manufacturing Liberty motors. As he testified here, 75 per cent of it was wasted, lost. That holds good in almost every bit of manufacture we have carried on.

I do not ask as to the latter part of the statement, but as to Mr. Trego, do you know whether he had an excellent motor or a valuable motor or not?

Secretary BAKER. I do not.

Mr. FREAR. The suggestion contained here, whether true or not, that Mr. Trego had a motor he was endeavoring to develop, and that he was given this Liberty motor production with the object of ignoring or limiting the use of his own motor; do you know anything about that fact, whether it is true?

Secretary BAKER. No, sir. A substantial number of men came to Washington with motors, foreign and domestic, which they suggested were better than other motors, and they were put before experts to decide whether that was so or not.

Mr. FREAR. Here is a suggestion in regard to airplanes. I am inquiring whether you are familiar with it:

At the Curtiss plant some 13,000 or 14,000 people are on the pay rolls and working under this system (cost plus), and it has been suffering from 60 to 70 per cent of idleness, and it has been toying with our contracts and yielding us nothing and getting the people's money.

Very much the same conditions prevail at the Standard Co. The fault comes back to the Government or the officials allowing them to go and scrap certain material and let the Government pay for it.

In relation to this statement, the Thomas committee went to Buffalo and other places and investigated conditions, and found, as the testimony shows, that there was a great deal of delay, and found that the people were not being employed, although many were being carried on the pay rolls who did not seem to be engaged in any activities. Can you suggest what was the cause of that?

Secretary BAKER. No; I do not know the facts about that.

Mr. FREAR. Can Gen. Squier tell us?

Secretary BAKER. I think so. But, speaking, generally I will say that throughout the war in a great many industries men were carried on pay rolls with nothing to do for the purpose of holding the organization ready to start some very important job. For instance, the Browning machine gun, which was perfected during the war. We held men in a plant, I think the plant of the Remington Arms Co., for some time, some weeks, while they were retooling the factory to start on the manufacture of the Browning machine gun. If we had allowed those workmen to scatter while they were building up the machinery, as they were expert arms men, you can see what the result would have been when they did start up.

Mr. FREAR. This committee can very readily understand, Mr. Secretary, that where it is necessary to have an additional supply that might be true; but here is a statement, verified by other witnesses, as to the large number of unemployed at the Curtiss factory, and this was rather late in 1918.

Secretary BAKER. They might have been holding them for some design; I do not know about that. I think Mr. Hughes comments on that.

Mr. FREAR. He does. I am taking Borglum's testimony; and they went there and made their own independent investigations. Mr. Borglum makes this statement, which may be significant:

There is a continuous reference or recurrence in all troubles in regard to delays everywhere which comes back to Deeds or comes back to Dayton. Deeds and Dayton are one. The one is the same as the other, as if it is the final referendium on everything. It is always coupled with delays, interference, or difficulties.

The suggestion there is made that Mr. Deeds, from Dayton, where a number of these activities were eventually centered—that he had charge—and he did have control, did he not, under Gen. Squier, control of this question of production, during a part of the time?

Secretary BAKER. He undoubtedly, at one time or another, had various positions under Gen. Squier, and was an influential if not a determining factor in regard to the production question.

Mr. FREAR. The suggestion is brought out here that in any production throughout the country the matter comes back to Deeds and Dayton; and, of course, incidentally, the Delco ignition system, which was placed upon the Liberty motors. Would you say—but, never mind; I will withdraw that question in view of what you have already said.

Secretary BAKER. I am perfectly willing to express an opinion on anything I know about.

Mr. FREAR. Would you say that Mr. Deeds, or Col. Deeds, in his position, was acting independently of his personal interests throughout his connection with aircraft production?

Secretary BAKER. I will say that the first time I ever saw Deeds was after he was an officer in the Army. He came into my office first in uniform. From my first talk with him until the last time I saw him he seemed to be not only a devoted public servant but an enthusiast—a man almost beside himself with enthusiasm for the aircraft program. I have never seen anything about Col. Deeds that suggested the possibility of indirect or personal interest affecting his judgment.

Mr. FREAR. How was he appointed?

Secretary BAKER. Do you mean how was he appointed on the board?

Mr. FREAR. Yes.

Secretary BAKER. Doubtless on the recommendation of Gen. Squier and his associates.

Mr. FREAR. You had nothing to do with his appointment?

Secretary BAKER. No.

Mr. FREAR. You knew nothing about it?

Secretary BAKER. Oh, I knew nothing about it except as they recommended it.

Mr. FREAR. He didn't come to you with any recommendation from Gen. Squier?

Secretary BAKER. Oh, no; not at all.

Mr. FREAR. Mr. Borglum makes this statement:

In August or September, 1917, Talbott of Dayton visited Borglum in his home at Stamford, Conn.

Talbott was Mr. Deeds's partner—

Secretary BAKER (interposing). I know he says Mr. Talbott.

Mr. FREAR. He was Mr. Deeds's partner in many activities in Dayton. Mr. Borglum goes on to say:

Talbott then said to Borglum, "Look at the situation. Here I am asked to leave bridge building and canal building and to build airplanes." He said, "I do not know a damn thing about it; my boy knows nothing about it; Mead knows nothing about it; and Kettering knows nothing about it, and here we are given battleplanes and 4,000 training planes." I (Borglum) said, "How much do you get for the battleplanes?" He said, "\$12,000 apiece." And they were to build 4,000 of them, and that was a \$48,000,000 contract.

If Mr. Borglum's statement is true, and of course that is the assumption that I am going on; if his statement is true, Mr. Talbott of Dayton had gotten some very large contracts in regard to the manufacture of airplanes that he knew nothing about; that is, as to their manufacture, he knew nothing about the matter.

Secretary BAKER. That is true of every manufacturer who manufactured airplanes.

Mr. FREAR. How would he have gotten that contract?

Secretary BAKER. Do you mean by whose judgment?

Mr. FREAR. Yes.

Secretary BAKER. Undoubtedly Gen. Squier confirmed the conference reports on the subject.

Mr. FREAR. Gen. Squire presumably did not know Mr. Talbott personally?

Secretary BAKER. I do not know about that.

Mr. FREAR. Would you think that the connection of Col. Deeds had nothing to do with the placing of a contract like that in Dayton?

Secretary BAKER. Undoubtedly, Col. Deeds's knowledge of Mr. Talbott—or Talcott?

Mr. FREAR. Talbott. He is a banker there.

Secretary BAKER. His previous business arrangements were based upon Col. Deeds's knowledge that he was a man of affairs and influence there.

Mr. FREAR. Mr. Talbott was one of the partners in the Delco plant, and as shown, he was a banker. It speaks of this contract being given to him without any inspection or preparation so far as any suggestion is concerned.

Secretary BAKER. That is perfectly impossible, that Col. Deeds should award the contract to Talbott.

Mr. FREAR. No; Gen. Squire would sign it.

Secretary BAKER. Not only would Gen. Squire sign it, but every item, every detail of the manufacturing facilities of Dayton was canvassed and recanvassed, and the wisdom of letting that contract was discussed among those gentlemen and finally recommended, and then approved by Gen. Squire.

Mr. FREAR. Then afterwards it develops in the testimony that the aircraft interests were centered in Dayton, and that the Curtiss Airplane Co. was given no contracts, and they stopped work there and

elsewhere, but they kept up the work at Dayton. What is the inference from that; that they were better prepared?

Secretary BAKER. I should prefer to indulge that inference.

Mr. FREAR. Mr. Talbott says he didn't know about building such things?

Secretary BAKER. No; and at that time but few people knew about it, but they knew afterwards.

Mr. FREAR. Well, there were complaints?

Secretary BAKER. Well, I can not say as to any complaints, but there were different rates of progress. Some went faster than others.

Mr. FREAR. Do you understand that they went forward faster at Dayton?

Secretary BAKER. I do not know about the facts as to them.

Mr. FREAR. Mr. Borglum says:

Anybody who knows anything about any kind of an engine—

And that refers to the Liberty motor—

who will in an emergency of war take up the creation of an entirely new instrument, of doubtful results of almost interminable experiments * * * to go through all the fine adjustments, to get a machine that will live in the air under the extraordinary conditions it is called upon to respond to, can not do that in three weeks or six months. That is the history and that is the knowledge of all engine men.

Secretary BAKER. That is Mr. Borglum's own judgment.

Mr. FREAR. This is Mr. Borglum's own judgment. Mr. Borglum, of course, was a man who did have an understanding of machinery and engines and things of that kind?

Secretary BAKER. I do not know that. Mr. Borglum is a sculptor.

Mr. FREAR. I understand that that is his business, but he was also connected with one of the aeroplane bodies?

Secretary BAKER. I do not know that.

Mr. FREAR. I think that was true, and that at the time he really presented a serious state of facts to President Wilson—I think those facts were presented to the committee, and I think I have the letters—and the President authorized him to go on and make an independent investigation. He was put in touch with your office, and with Mr. King, with which of course you are familiar.

Secretary BAKER. Yes, sir.

Mr. FREAR. And he carried on his investigation, and went about the country on his own motion, and came back with his report. This is one of the things he refers to in his discussion of the Liberty motor at that time?

Secretary BAKER. But the question you asked me was whether he was a reliable mechanic or not.

Mr. FREAR. Yes; with some judgment?

Secretary BAKER. I answer that I have no means of knowing.

Mr. FREAR. Do you know whether or not his statement is one that would be recognized as true by men generally who are experts in machinery—that it would take six months or thereabouts to perfect a machine?

Secretary BAKER. That calls for an opinion upon Mr. Borglum's reputation.

Mr. FREAR. No; I am not speaking of Mr. Borglum's reputation at all. Do you know whether experts generally would consider six months would be necessary for the perfection of an engine or a machine of the delicate mechanism necessary for air use?

Secretary BAKER. I think experts would say a longer time; and but for the extraordinary efforts with regard to the Liberty engine, people would have said performance of that kind was impossible.

Mr. FREAR. That is probably what confronted Gen. Squier when he made his decision and threw all of his eggs into one basket?

Secretary BAKER. Yes, sir.

Mr. FREAR. Mr. Borglum further says:

The trouble with the Bristol fighter was they were trying to put a Liberty motor in it and the Liberty motor has no more business to be in that than in a baby carriage.

Borglum then describes what he alleges are numerous faults in the plans. Was Borglum's judgment sustained by experts generally outside of Gen. Squier and his immediate associates as to the necessity for proceeding with the production of other engines than the Liberty motor?

Secretary BAKER. Really I know very little about the opinion of others as to what Mr. Borglum states there. Mr. Borglum's charges were turned over to the Attorney General for attention. I saw Mr. Borglum once or twice, but he did not impress me as a man I would want to rely upon in mechanical matters, but there is no doubt of his great ability in artistic matters. But he is a man I do not care to say anything about as to his reputation.

Mr. FREAR. Col. Arnold was in the Air Service from 1911?

Secretary BAKER. I know Col. Arnold slightly. He is a young officer of very great energy, and it is my understanding that he was an executive dealing with personnel in the Air Service.

Mr. FREAR. Col. Arnold testified:

We get approximately 30 cables a day relating to aviation. Pershing sent cable June 28, 1918, that the De Haviland machine as delivered was not satisfactory, but I ask the committee to get the original cable.

Secretary BAKER. I remember that cable.

Mr. FREAR. I understand that he had been a flyer for seven years. He testified further:

We have shipped no planes abroad other than De Havilands. De Havilands were continuously sent without tests. Could not get pilots; could not get factories to do it.

Secretary BAKER. What date does he give as the date of the Pershing cablegram?

Mr. FREAR. He does not give the date, but I think I have it here and will refer to it. He says:

Gen. Kenley insisted on tests after he took charge.

That is, Gen. Kenley insisted on tests, but the best they had up to that time was testing 1 out of 10 planes.

Secretary BAKER. I think they had been testing 1 out of 10, but Gen. Kenley insisted on testing each one. I remember the controversy at the time.

Mr. FREAR. Gen. Squier did not think it was important or some one else interfered?

Secretary BAKER. I do not think Gen. Squier had anything to do with that.

Mr. FREAR. Oh, I thought it was prior to Gen. Kenley coming to the department. He was in charge.

Secretary BAKER. He was in charge prior to Gen. Kenley, but when the cablegram came from Gen. Pershing—when was it?

Mr. FREAR. June 24, 1918.

Secretary BAKER. Well, I thought that was while Mr. Ryan was in charge. That is my impression because I remember that when that cablegram came it alarmed me very much, and I took it up at once with Mr. Ryan, and I feel quite sure it must have been Mr. Ryan. He analyzed the criticisms which were in Gen. Pershing's cable. Of course Gen. Pershing did not write the cable himself, but the people on the other side did, and they pointed out quite a number of difficulties in the planes; and after an analysis of it they were found simple, as to the most of them, and that they could be easily removed. Those that affected the safety of the machine, as to its use, were directed to be installed before any more were shipped. Those that were improvements were put upon the machines, and it did not delay the completion of the machines.

Mr. FREAR. Col. Arnold says that up to the time Gen. Kenley came in those machines were not tested; or that at the time Mr. Potter or Mr. Deeds or Gen. Squier were there they did not enforce the test except one out of ten.

Secretary BAKER. I think they tested one out of ten, but Gen. Kenley insisted on every one of them being tested.

Mr. FREAR. And that is what Gen. Pershing insisted upon?

Secretary BAKER. I do not remember that. The criticisms that Gen. Pershing was making were with regard to the construction features, as we call them. Of course, the principal defects with the De Haviland machine was with reference to the location of its gas tank. That was the thing the flyers took the greatest exception to, because it imperiled safety. As it turned out it was a bad placing from that point of view. But that was not in the Pershing cable, I think.

Mr. FREAR. Maj. Muhlenberg was before the Thomas committee, and he was a man, like Arnold, of some understanding of aviation matters because he had charge of the testing department at the Wright field. He testified:

The De Haviland is by no means the machine we want for a fighter, nor the machine we want for a bomber. It may be all right for reconnaissance or artillery observation, but certainly not as a fighter or bomber.

Then he gives a number of objections, to the Thomas committee, but that was his objection at the time.

Secretary BAKER. Yes, sir.

Mr. FREAR. He speaks of the matter brought up a little while ago, as to defects in ceiling, 15,000 feet, and says it should be greater. Consequently it gives only a very brief time to be in service as a bombing plane.

Secretary BAKER. Not as a bombing plane.

Mr. FREAR. As a bombing plane?

Secretary BAKER. As a fighting plane I do not think it——

Mr. FREAR (interposing). For bombing purposes they had to rise for a period of three-quarters of an hour, which took up too much time.

Secretary BAKER. Yes; that would be bad from that point of view.

Mr. FREAR. Then he speaks of the pilot and the observer being too far apart. Then he mentions this fact, which, of course, I suppose must have been brought to Gen. Squier's attention, that there were

structural defects showing it was not strong enough for its load, as it was a heavier machine, and why it interfered with the use of the De Haviland over there.

Secretary BAKER. The Liberty motor was not heavier.

Mr. FREAR. I thought it was. All through the Thomas hearings it was shown that that was the case, as I understood.

Secretary BAKER. It may be, but I do not think so. I think the Liberty motor is the lightest engine for its horsepower that there is.

Mr. FREAR. Will you have that put into the record?

Secretary BAKER. Ask Gen. Squier about it, but I have never understood the contrary. But we could not get the Rolls-Royce.

Mr. FREAR. Couldn't you have manufactured them?

Secretary BAKER. The Rolls-Royce is a hand-made engine, and you have to have very skilled mechanics to do that handwork. But even the British were not able to make them and that is the reason they wanted our Liberty motors.

Mr. FREAR. What could a De Haviland plane with a Liberty motor be used for?

Secretary BAKER. For bombing purposes.

Mr. FREAR. Of what practical use was it if it took 48 minutes to get to the ceiling?

Secretary BAKER. I agree with you that that is a limitation upon its use. As to Maj. Muhlenberg suggesting the Rolls-Royce, as he did, I will say that England had her storage places stacked up to the ceiling with planes because she could not make engines for them.

Mr. FREAR. He says we attempted to use the Liberty motor. He mentions the propeller tearing the cloth from the rear due to the high power of the Liberty motor?

Secretary BAKER. That of course is true of the Rolls-Royce as well.

Mr. FREAR. He says the Rolls-Royce is a 375 horsepower motor?

Secretary BAKER. It doesn't have as high power as the 450-horsepower Liberty motor.

Mr. FREAR. He says the pilot is between the wings, and that structural defects show that it is not strong enough for the load?

Secretary BAKER. I have heard that criticism.

Mr. FREAR. It seems to be true to those of us who walk on the ground, and we must be prepared to believe it of things up in the air.

Secretary BAKER. Every element of safety for anyone in such perilous occupation should be added.

Mr. FREAR. I think so. That reminds me, according to your report, page 53, speaking of fatalities, you say:

The reported battle fatalities up to October 24, were 128 and accident fatalities overseas 244. The result of allied and American experience at the front indicate that two aviators lose their lives in accident for each aviator killed in battle. The fatalities at training fields in the United States to October 24 were 262.

That makes a little over 500 fatalities. Of course, that calls for the best protection that we can give them. Naturally a great many accidents occur through the fault of the men themselves in charge. We understand that. But those over in Europe were in the situation and were complaining, as I understand, that there was no chance to get out alive in a crash when using the machines shipped over?

Secretary BAKER. But no substantial number of fatalities either in battle or by accident in Europe were in De Haviland machines.

Mr. FREAR. What machines were they?

Secretary BAKER. They were in training planes of various types. The accident fatalities, both in this country and abroad, as to some of them, were undoubtedly in De Haviland machines, but all kinds of training machines were used.

Mr. FREAR. Of course the De Haviland with the Liberty motor did not get into production until the last?

Secretary BAKER. No. Of course, the De Haviland machine had certain defects, as we know, but these accidents in training did not refer to De Haviland machines.

Mr. FREAR. It is pointed out that by putting the pilot between the Liberty motor and the gas tank he had no chance to escape in case of accident. And Maj. Muhlenberg says:

It indicates the grossest kind of carelessness in assembling.

He says the Liberty motor was too heavy. I am not now reading the testimony, but that was what was said, and it is a comparison I am making, and a number of witnesses testified that the Liberty motor was heavier than other engines used in machines.

Secretary BAKER. Of course, that is not what we were talking about. This is talking about the Bristol fighter, in which the engine is not the Rolls-Royce. We were talking about the De Haviland. The English De Haviland used the Rolls-Royce. I recall that the Bristol fighter used a smaller engine than the De Haviland.

Mr. FREAR. Senator New made this statement to you in the Thomas committee hearing:

It is a fact that every flyer that we have had before this committee as a witness, including several who have seen long service abroad both with our own forces, the British forces, and the French forces, have testified that the De Haviland 4 machine, with the defects appearing in it as it has been produced at the Dayton-Wright factory, is highly dangerous and ought not under any circumstances be used; and at least one officer has testified that he would no longer send men up from his field in a machine of that type until after these defects had been remedied. In view of that condition, as it has been expressed and recorded by the men who are best qualified to pass upon the conditions and quality of that machine, I at least think that it was a very great error of policy and judgment to have sent them forward before those mistakes were corrected, and I wanted to know whether or not you agreed with that view.

And this is what you replied:

The subcommittee, of course, has a great advantage over me in that I have not been permitted to see any of the testimony the committee has taken, so that I do not know anything about this concurrence of opinion to which you refer.

And Senator New then added:

I am telling you now what that opinion is.

That is what occurred there.

Secretary BAKER. I think so.

Mr. FREAR. Here was a committee that had a great many flyers, I assume, to appear before them, or at least a number of them, and I take it they reached that general consensus of opinion. I ask you that for information?

Secretary BAKER. It was not the general consensus of opinion brought to my attention, Mr. Frear. It is a very difficult situation. I understand, and it is a somewhat embarrassing situation to be placed in. Senator Thomas and his committee had a very large

number of witnesses whose names were not known to me; I did not know them, and do not know them now, haven't seen them or their testimony, and do not know what they said—whether they gave comparative estimates or positive statements, or mature judgment or impulsive judgment. Then Senator New summed up what seemed to him the situation, on which I had no information and therefore no opinion.

Mr. FREAR. I am now asking whether or not this is the consensus of opinion so far as you know?

Secretary BAKER. Not so far as I know. Undoubtedly many flyers felt that way about some defects of the De Haviland machines, and others think otherwise. As to this allegation about the gas tank, I think there were a number who thought that was wrong. As to other matters there are wide divergencies of opinion. I have had some flyers to say that they think it is the best machine they ever flew in, and others to say they wouldn't go up in one unless they were forced to do so. Mr. Ryan said that our flyers in France were enthusiastic over the De Haviland machine.

Mr. FREAR. And Mr. Ryan gave practically the same answer that you did in regard to the uncertainty as to whether the flyers opposed it. Undoubtedly his judgment must have been based upon some information he got.

Secretary BAKER. Undoubtedly.

Mr. FREAR. The cablegram from Gen. Pershing, on June 24, 1916, which you said, as to many of the suggestions, were more or less unimportant and matters which could be corrected here, I will read three or four to indicate just what the character of some of those objections were as appears in the cablegram, so that we may form some judgment as to whether or not we were exercising sufficient care in sending our machines over there. I read from the cablegram:

No check cables have been applied to check axles from forcefully striking threads of running gear.

Of course I have only a layman's idea of these things, and that is what anyone except an expert would have, I take it?

Secretary BAKER. Yes, sir.

Mr. FREAR. This cablegram contains a very great many objections, about 60 in number, but I am only reading here and there to give a general idea of the character of the objections.

Liberty motor is defective indicating shop inspection not satisfactory. Lincoln apparently better than Packard.

And the next one:

Open carburetor not safe, and neither British nor French will use them. Imperative arrange gasoline duct pipe to carburetor and drain it outside fuselage.

I have no idea what this means, except he says that the British and French will not use them, and if they would not use them our men should not be expected to use them.

Secretary BAKER. It means that the carburetor was open and that gas would escape from it. The English and French were afraid it would ignite the gas tank.

Mr. FREAR. And if that was true of the British and French it would be true of our own people, wouldn't it, and be unsafe to use?

Secretary BAKER. Yes, sir.

Mr. FREAR. And the next objection:

Flight tests in England supervised by Capt. Munford indicates Zenith 52 carburetors not satisfactory and cheaply made, but better results from Claudel.

Of course this means much to the lives of the men in the air?

Secretary BAKER. Yes, sir; and of course everything is important to them.

Mr. FREAR. We all agree on that.

Secretary BAKER. Yes, sir.

Mr. FREAR. The next objection which I read is this:

Present system main gasoline tank under air pressure should be changed because of danger from fire and because if punctured above liquid level by rifle bullet pressure is lost. Suggest enlarging needle valve on carburetor and altitude adjustments and use of gravity feed tank in upper wing or pump between tanks and carburetors. Overflow for gasoline from upper tanks should be conducted to point at least 6 feet from exhaust and visible by pilot. One plane destroyed by fire due this defect.

These corrections I suppose were attempted here?

Secretary BAKER. Yes, sir; immediately.

Mr. FREAR. Another is this:

Sight mountings for fixed guns light enough and require special tools to attach. Aldis ring sight mountings inconveniently placed, can not be used by pilots.

And another one:

Synchronizing gears entirely useless.

Secretary BAKER. That has to do with the mounting of the machine.

Mr. FREAR. That has to do with the mounting of guns, which, of course, is very important to the men for their own protection.

The next article is this:

Reservoir badly made; must all be replaced. Low-pressure valves in very bad condition. High-pressure cylinder cuts cup leathers, due to bad machining. Several high-pressure springs have broken; apparently defective. High-pressure pipe connections broke in several cases; badly designed.

Now, here is the Liberty motor. I have read only a few of Gen. Pershing's objections, but here is what is supposed to have been a standardized motor, brought to perfection—or at least they supposed they had reached perfection—at a time when we had dropped all other motors. Here are three and a half pages, closely written, of objections forwarded in a cablegram by Gen. Pershing against this Liberty motor, upon which so much time has been spent, and which had reached perfection. The Caproni and other airplanes all had various engines, and they were working all right, or at least were being used by other countries, and we were not manufacturing a single one of them.

Secretary BAKER. Yet the fact is that in September, when I was in France and in England with Mr. Ryan and with Mr. Stettinius, the British and the French were so anxious to get Liberty motors that they would trade us anything for them. I was trying to find out if we could get certain types of artillery and certain types of other supplies, and every time I asked the French or the British for anything their immediate request was to know if they could get Liberty motors back for them.

Mr. FREAR. In July and August was when we were rapidly losing our men in battle.

Secretary BAKER. In July and August was when we were perfecting this work.

Mr. FREAR. And you were not doing anything with any other motor except the Liberty?

Secretary BAKER. We were developing other motors. The Hispano-Suiza, for instance, and a very excellent motor.

Mr. FREAR. We did not send any over to our soldiers in France?

Secretary BAKER. I do not know about that. There has been production, and we were engaged in quantity production.

Mr. FREAR. As I have said, there are a number of other objections enumerated in this cablegram—I think 60 altogether—but the last one is:

When operating this far from base of supply, it is essential that defects which are discovered by inspection in the United States be corrected there.

That was an objection to the method of inspection, and after that you undertook to have it corrected?

Secretary BAKER. To have it more rigidly inspected.

Mr. FREAR. The next cablegram is dated June 29, 1918, in which Gen. Pershing says:

It is not possible to make changes and alterations in planes and engines here on large scale.

Of course they were constantly bringing these matters to the attention of the people over here, I take it?

Secretary BAKER. Undoubtedly.

Mr. FREAR. Mr. Landon was under Deeds. He was one of the assistants, a man of understanding, apparently. I get this from the Hughes report. He was engaged in production under Nash. He was a man who was apparently given this position of some responsibility in regard to production. I will read only a small portion of his statement, made to Mr. Coffin, which seems to have been very important at that time. I will read from the Hughes report.

Secretary BAKER. What is the statement by this Mr. Landon, or Col. Landon, whoever he was?

Mr. FREAR. He was Mr. Landon. In his letter to Mr. Coffin, dated October 16, 1917, he says:

This is not intended as a criticism of Gen. Squier or the other officers, but it is intended to be a very vigorous criticism of methods of organization that make such a condition possible; and I submit it to you, sir, that, if this same condition exists in all departments and continues to exist, we might as well submit to the Germans now, because the one way you can beat efficiency is to match it with efficiency, and efficiency can only be obtained by a thorough organizing of our responsibilities and following them through to a definite conclusion, which conclusion should be the winning of the war.

Then the Hughes report continues:

Mr. Landon, leaving the aircraft work in October, 1917, returned to it in June, 1918, then becoming chief of the production of aircraft in the Bureau of Aircraft Production. Up to that time the policy he had recommended had not been changed in the organization in six months; that is, prior to the new organization through the Bureau of Aircraft Production which had been just instituted.

That is to say, Gen. Squier was in control there. Would you say that that criticism was warranted or was not?

Secretary BAKER. Well, I have not read it in extenso. I do not know what he is talking about.

Mr. FREAR. It is set out in full in the Hughes report.

Secretary BAKER. I have heard you read it. But I do not know what he had in mind, whether it was a question of division of respon-

sibility. There was the constant question there of centralizing responsibility, but finally they got it under one man.

Mr. FREAR. Here is a statement by Mr. Ford—

Secretary BAKER (interposing). Who is Mr. Ford?

Mr. FREAR. He is a very prominent gentleman in Detroit, with whom we are all acquainted, more or less, and I thought was pretty well known in the departments at Washington—Mr. Henry Ford.

Secretary BAKER. Oh; I did not know he had ever testified.

Mr. FREAR. On page 217 Mr. Ford said:

I do not know how you can have the head of an aircraft division around New York, sitting down there and have him do very much. This is the first time I have said anything about Mr. Ryan, and I do not know anything about him. I think they ought to be on the job, no matter who they may be.

Ford is called an expert in regard to the manufacture of engines, and at the time he was complaining, let me say by way of explanation, about defects and delays he had in the matter of production because of constant changes that were being urged upon his factory.

He further says:

It is necessary to have somebody who is broad and knows what he is talking about to go around to the factories and tell them what to do.

I think we will concede that. He found the situation at that time to be as he testifies here.

Secretary BAKER. Well, his observations are not only those of a very great expert, but they are obviously true. The only comment I want to make on that is that Mr. Ryan had very recently taken charge, when that was said, and he immediately accomplished what Mr. Ford said was a wise thing to do.

Mr. FREAR. Of course the fact that Mr. Ryan did take charge at that time, and assuming that he did better than his predecessor, indicates that there must have been a failure along the line prior to that time which must have been very serious?

Secretary BAKER. I do not want to adopt an extenuating attitude, but we were all learning all the time, and I hoped everything we did on Wednesday was better than what we did on Tuesday.

Mr. FREAR. Unquestionably.

Secretary BAKER. And the experience that we had in the new art, and in developing a new art, and putting it into quantity manufacture, taught us all the time new ways of improvement, and we tried to adopt them.

Mr. FREAR. Yes; but there is something else in that. There were those who could do the work far better than Gen. Squier, and there were others who certainly could do this work better than Deeds, and subsequently they were relieved from positions they held.

Secretary BAKER. They were relieved and others put in their places, and the situation constantly grew better, but how much each man benefitted by the mistakes of his predecessor it is difficult to say.

Mr. FREAR. None of those men was an aircraft man.

Secretary BAKER. There wasn't an aircraft man.

Mr. FREAR. None whatever.

Secretary BAKER. Very few. There were a few men in this country, like Wilbur Wright, Glen Curtiss, and men of that type, but there were very few aircraft manufacturers; none except the Curtiss peo-

ple. There were the Standard Aircraft people, and one or two others, but they were small. When I tried to get aircraft for the Texas border I could not get a promise of delivery under months and months from any existing factory in America, and the planes I ordered for the Texas border I did not get for a year after the promised delivery, because there were not people who knew how to make them.

Mr. FREAR. There were men in this Government, who had been in public life, men who had accomplished things, things along the line of the work that you have, and where your responsibilities were so great, like Gen. Goethals and possibly Mr. Garrison, your predecessor, and others; men of that type, could not have been put upon this work if they had been willing to accept positions?

Secretary BAKER. Let us take the two you named; my predecessor was certainly a very distinguished man, of very great ability, but he was a lawyer not an aircraft man. At least I do not know anything about Mr. Garrison's knowledge of aircraft, never heard or knew of his having anything particularly to do with it. It had not been one of his prominent positions, at least. And as to Gen. Goethals, he was only one man, and he was having everything he could do to build ships.

Mr. FREAR. But he was out of the shipping work for a long time?

Secretary BAKER. Not at that time. He was the president or the chairman of the shipping committee at that time. Mr. Denman was the chairman of the Shipping Board, but Gen. Goethals was running the Emergency Fleet Corporation at the time, as I recall. Very shortly after Gen. Goethals left the Shipping Board he was called back into the Army and put in charge of the Quartermaster Department, where he very naturally had all he could do, and then he had charge of the Purchase, Storage and Traffic Division, so that he was fully occupied all the time.

Mr. FREAR. He testified that he was relieved because of his age, and I do not know now whether he said he was 56 or 59 years of age.

Secretary BAKER. Retired from the Army?

Mr. FREAR. Yes.

Secretary BAKER. You know the facts, that in recognition of his service in building the Panama Canal Congress gave him an additional grade, major general, and authorized him to go on the retired list, and that he could go on his own initiative. He found profitable employment outside, in an engineering way, and retired.

Mr. FREAR. I think he testified that he was out until December of that year when he was called back.

Secretary BAKER. I do not remember how long he had been out.

Mr. FREAR. I just spoke of him as a man of recognized ability.

Secretary BAKER. Well, he was a type.

Mr. FREAR. And a very remarkable type of man, who could get results?

Secretary BAKER. Yes, sir.

Mr. FREAR. And these men who were chosen had had no previous experience along this line whatsoever, had they, in public matters?

Secretary BAKER. To whom do you mean by that?

Mr. FREAR. Take Squier, Deeds, Potter, and Ryan. Of course, in private production they may have had some experience, some of them, but I understand that they had had no particular knowledge of these matters?

Secretary BAKER. Well, I would say that Mr. Ryan had had about as much of a successful business career as any modern American; I do not know of anybody in America who has had a larger and more successful one. Col. Deeds has had a very successful business career directly in connection with the production matter, and so has Mr. Coffin.

Mr. FREAR. What was Col. Deeds's production experience outside of the Delco ignition system?

Secretary BAKER. My impression is, though I have no accurate knowledge of Col. Deeds's previous career, but my recollection is that he was connected with the Dayton Computing Scale Co.

Mr. FREAR. What did they manufacture?

Secretary BAKER. Computing scales

Mr. FREAR. I thought he was connected with the cash register business?

Secretary BAKER. Maybe it was the cash register instead of the computing scale. But he has been interested in all kinds of production and manufacture, and Dayton is a manufacturing city, and Col. Deeds was recognized there as one of the foremost manufacturing men of the place.

Mr. FREAR. I wondered what he was engaged in outside of Delco?

Secretary BAKER. Well, the cash register was one, and a very large enterprise.

Mr. FREAR. Eventually, of course, there were a great many airplane activities started in Dayton after Deeds came in.

Secretary BAKER. Mr. Frear, I haven't the slightest doubt that if I had had a divining rod and gone around over the United States with the stick in my hand, and it was infallible in pointing out the right man, I could have succeeded in inducing some great genius to drop his career for the time being and contribute his great genius to the services of his country. But genius we did find, and we found men who were apparently valuable men, through their previous business experience, and they inspired confidence and were enthusiastic on the job.

Mr. FREAR. I admit that you probably exercised the best judgment that you had.

Secretary BAKER. Absolutely.

Mr. FREAR. Mr. Ford puts it on this ground, or Mr. Lee, who says he is his chief engineer and who is testifying:

I think Mr. Ford means a lot of petty jealousies among the engineering corps. Another thing is, that if they had the headquarters of the Signal Corps in Detroit, where all the engines are produced, and all the engines are wanted, instead of in Washington, it would expedite and smooth things.

That is what he ascribed the trouble to.

Now, you spoke of Lieut. Col. Clark.

Secretary BAKER. Yes, sir; Virginius Clark.

Mr. FREAR. This is Lieut. Col. D. E. Clark.

Secretary BAKER. I think not.

Mr. FREAR. This is the Clark who testified before the Hughes committee.

Secretary BAKER. I think he must be the same man.

Mr. FREAR. Clark is a military aviator. He has been flying five years; in 1914 was sent as the only Army officer to receive a post-

graduate course in aeronautical engineering of airplane design at the Massachusetts Institute of Technology; afterwards was put in charge of experimental and repair department of the aviation section of the Army, June, 1915. Clark was then the first aeronautical engineer in the Army.

Secretary BAKER. Whose judgment is that?

Mr. FREAR. That is the statement here.

Secretary BAKER. It is my own impression.

Mr. FREAR. Well, that is the statement that appears here. It goes on to say:

Clark was selected on the Bolling commission and was assigned the duty of getting all the available data concerning developments of airplane design and construction from Italy, from France, and England; visited all three countries, went through the factories, and submitted report by cable, which was confirmed immediately upon his arrival back in the United States, September, 1917.

Then in his testimony he said:

I recommended for a single-seater combat plane the Spad; and for a single-seater pursuit, the Martinside. Neither was ever built.

When I returned, and by cable before I returned, I recommended the Caproni triplane, or if the Handley-Page could be put into production more quickly than the Caproni the Handley-Page should be built.

Secretary BAKER. That recommendation of course was taken.

Mr. FREAR. But we never produced any Capronis?

Secretary BAKER. The Handley-Page was dropped on account of quantity production.

Mr. FREAR. Col. Clark was sent over in June, 1917, as I remember, or when was he sent over?

Secretary BAKER. I think it was in June.

Mr. FREAR. Right after the declaration of war, with the Bolling commission, and it took a long while, over a year thereafter, to get started.

Secretary BAKER. I can not answer as to why these recommendations were not adopted. Col. Squier would know that.

Mr. FREAR. I understand that. I am simply reading into the record this testimony, and if no explanation is offered all right. I am not holding you to intimate knowledge of the subject?

Secretary BAKER. Well, then, the record ought to show that when I am silent that Gen. Squier or someone more familiar with the facts will have to be asked about it.

Mr. FREAR. I am very glad to have that go into the record. He goes on to say:

Col. Deeds first appointed me, and I was removed by the same authority. Col. Deeds told me he had a very important position for me. He wanted me to come to Washington to sit at his right hand. I was never given any duty in Washington; I did not sit at his right hand nor at his left.

Col. Clark then testified to a great many things that occurred at the outset. Then Senator Frelinghuysen asked some questions, as follows:

Senator FRELINGHUYSEN. At the present time there are too many cooks and they spoil the broth?

Col. CLARK. Yes, sir; there are hundreds of cooks. There is, I am told, scarcely an officer in the production department that is qualified to go out in the field and give an order.

Senator FRELINGHUYSEN. Did you have any differences with any of the officials of the Dayton-Wright Co., or any of the concerns manufacturing equipment in Dayton during your term of service?

Col. CLARK. I started to make some criticisms about what I considered the salient weak points in the construction of the De Haviland 4 as it was being built at the Dayton-Wright plant but I was not permitted to make any suggestions; after I made one or two to Mr. Kettering and Mr. Schoonmaker, who were the two engineers out there, I was relieved, about a month later.

Here was a practical man, a flier, a man who, as you have stated, was an expert, and a high-class man in the service, and when he attempted to make suggestions to Kettering and others in regard to what was necessary from the flier's standpoint, he was brought back to Washington to be Col. Deeds's righthand man, but when he got here he was neither his righthand nor his lefthand man?

Secretary BAKER. Of course, I know nothing about that, but Col. Clark was an aero-dynamic engineer. His knowledge, as I have always understood, was in connection with gas engines; and they were not making gas engines at Dayton but were making the aeroplane part of the machine. It would seem to me in the interest of good administration not to have Col. Clark to go and talk with Mr. Kettering in a factory but to talk with some one in Washington, who wouldn't give countermanding instructions later.

Mr. FREAR. He was sent out there for what purpose?

Secretary BAKER. He was sent out to observe, I suppose. That was one thing, and if he was sent to boss the shop that would be another thing.

Mr. FREAR. It was my assumption that he was sent out by Col. Deeds, presumably at least, because of differences of opinion. Clark, Arnold, and Meuhlenberg were fliers, men whose judgment were entitled to much consideration?

Secretary BAKER. Undoubtedly.

Mr. FREAR. And this testimony occurred in the Thomas committee hearing:

Senator REED. You know that the best and most experienced fliers, a number of them in this country, have testified before this committee that they regard the De Haviland machine as utterly unsafe, and that they would refuse to go up in it or send subordinates up in it?

Mr. RYAN. I understand that some have testified that they have refused to go up in it or let subordinates go up in it.

Senator REED. You propose to go on making the De Haviland 4 machines?

Mr. RYAN. Until we can put the De Haviland 9 into production.

Senator REED. Do you intend to do that regardless of any testimony that may be given by experienced fliers that the machine is utterly unsafe?

Mr. RYAN. I am not convinced that the burden of testimony of the fliers throughout the country is that the De Haviland 4 is an unsafe machine.

Secretary BAKER. Mr. Ryan and I talked over that general question, and his answer is entirely—

Mr. FREAR (interposing). What is the situation there?

Secretary BAKER. I recall that the matter was brought up and I approved that we should not suspend making any machine we were making, but we should go on and make it, and get ready to make others at the same time, except where an element in a machine involved unnecessary and avoidable danger to the flier that that should be corrected before further machines should be made of that type.

Mr. FREAR. Wouldn't you go further than that and say, there would be no object in building machines until they could be used for the purpose for which they were constructed?

Secretary BAKER. If they could be used for any purpose which would be useful. We did not want to hold back aircraft production until we could get one that was satisfactory.

Mr. FREAR. I take it the complaint in the Thomas and Hughes reports are that nothing was done but to center all operations around the Liberty motor?

Secretary BAKER. I think you will find upon inquiry that that did not take place.

Mr. FREAR. It is now time to take a recess, and the subcommittee will stand recessed until 3 o'clock p. m.

(At 12.45 o'clock p. m., the subcommittee recessed until 3 o'clock p. m.)

x

SUBCOMMITTEE NO. 1 (AVIATION) OF THE
SELECT COMMITTEE ON EXPENDITURES IN THE
WAR DEPARTMENT, HOUSE OF REPRESENTATIVES,
Thursday, July 31, 1919.

AFTER RECESS.

The subcommittee met at 3 o'clock p. m., pursuant to the taking of recess.

TESTIMONY OF HON. NEWTON D. BAKER, SECRETARY OF
WAR—Resumed.

Mr. FREAR. Mr. Secretary, the hearing this morning concluded with a question as to the testimony of Col. Clark, Col. Arnold, Maj. Muhlenberg, and men in charge of aircraft production or concerned with it and their authoritative statements in reference to the De Haviland-4 machine, the Bristol, and criticism of the general aircraft program. These officers are all soldiers and in the regular service at this time, may I ask?

Secretary BAKER. I do not know them all. I do not know about Maj. Muhlenberg. Col. Clark is a regular officer.

Mr. FREAR. Assuming that they are, their testimony ought to be taken as fair and unprejudiced, in that they were in the service?

Secretary BAKER. Undoubtedly as far as their experience was concerned it should be accepted at its face value. Whether or not their judgment was sound—

Mr. FREAR (interposing). Is a matter to be determined of course as to each individual. One of the subcommittees was in New York yesterday, the subcommittee of which Mr. Johnson is chairman, which held some hearings on matters that I turned over to him in regard to aircraft, because we could not go up there. Some of the matters that were brought out appeared in this morning's paper. Of course, we have not the testimony, but just referring to Lieut. Lockwood's statement—this is a quotation from the Washington Post of this morning:

Lieut. Lockwood, asked about air service conditions at the front prior to the armistice, said they were very poor as regards equipment, especially during the Meuse-Argonne offensive, the biggest drive of the American Army. At one time, he said, 40 American pilots were kept on the ground because of the lack of machines, and as a result the German airmen came over the American lines in great numbers. Conditions in the St. Mihiel sector were better, the witness said, the Americans having superiority in the air there.

What can you tell the committee as to the conditions that existed over there relating to our shortage of aircraft?

Secretary BAKER. I do not know about that, Mr. Frear. The principal knowledge I have of those offensives is from Capt. Rickenbacker's book, called *Fighting the Flying Circus*. He describes with great enthusiasm the big collection of aircraft on the St. Mihiel sector.

Mr. FREAR. He was under Gen. Mitchell?

Secretary BAKER. I think so. Gen. Mitchell's testimony, by the way, gives an account of that—the largest collection of aircraft gotten together in the history of the world. In the Meuse-Argonne offensive, of course, we were fighting along a vast front, and everybody was fighting there, so that whatever aircraft there were there were doubtless distributed equitably.

Mr. FREAR. But we were at a disadvantage there—what I mean to say is that as far as the American aircraft were concerned, we had a very small number comparatively?

Secretary BAKER. I do not know what the fact is as to that.

Mr. FREAR. In this connection, I have a letter from which I wish to read very briefly. It comes to me from one who is very close to me and was over there, but I never thought of referring to it until a day or so ago, when it was called to my attention by the boy's mother, who brought it out of the family files. It describes a condition that was generally felt by most of the soldiers who were there at that time. It is dated August 11, 1918, and says:

Your past experiences bring you unusually close to the service, and you can appreciate better than nine out of ten persons the soldiers' welfare. You can rest assured they are doing their part to the very last and best that is in them. I was never more proud of my country than I have been since I came up to this location. Even the French admit that their greatest efforts do not surpass those of the Americans in the present struggle. I have seen them going in and afterwards at the hospital. Their spirit is the most wonderful thing you ever saw in your life. They say the casualties in our division (the Thirty-second) are quite large, but their efforts and their driving capacity can not be surpassed. Just keep on lending them all the assistance possible—no one deserves it more. I wouldn't have missed this war for anything. I guess I have gone through all of the sensations possible for me to have.

If you will only send us more airplanes, and then more and more, it will hasten the finale. The men are coming through fine, but the airplanes have disappointed us. We depend upon these so much more than you can appreciate.

Secretary BAKER. That is a very feeling and beautiful letter, and undoubtedly every word of it is so.

Mr. FREAR. That was the sentiment of the soldiers over there, their anxiety to get airplanes, was it not? We all appreciate that.

Secretary BAKER. Yes; in as great numbers as possible.

Mr. FREAR. In as great numbers and as rapidly as possible. And we did not during the whole period of the war get a fighting machine or a bombing plane.

Secretary BAKER. Not a fighting machine or a bomb of American manufacture.

Mr. FREAR. The testimony covers many witnesses in these various hearings, and this is just to lay a sort of foundation for further examinations, if we choose to make them, in regard to the situation that developed. Of course, there is no curing that; it is only a matter of criticism and to enable us to suggest improvements for the future.

Gen. Squier was in charge of aircraft at the time the war broke out?

Secretary BAKER. I do not think so—yes; at the time the war broke out Gen. Squier was; Gen. Scriven had retired earlier than that.

Mr. FREAR. And I believe you said you were not following closely what was being done in aircraft at that time?

Secretary BAKER. No; I was not.

Mr. FREAR. And I understood further that you did not know Mr. Deeds until he came here?

Secretary BAKER. Oh, no; I had never heard of him before.

Mr. FREAR. He is from your State? He is from Ohio?

Secretary BAKER. From Dayton.

Mr. FREAR. You finally appointed him?

Secretary BAKER. I have been refreshing my recollection by looking at Judge Hughes's report, and he says that I did; so evidently I did. It is a matter of record. I had forgotten whether I appointed him or who did.

Mr. FREAR. In making a selection of a man for such an important position it is well to get one who has as good a grasp of the situation as possible, naturally?

Secretary BAKER. Surely.

Mr. FREAR. And it is important to get a man whose personal actions would be above criticism as far as possible?

Secretary BAKER. Certainly.

Mr. FREAR. One whose record, we will say, was beyond suspicion of being influenced by personal interests? Naturally so?

Secretary BAKER. Yes.

Mr. FREAR. In order to make the record complete in regard to Mr. Deeds, who had charge of aircraft—over what period of time, would you say, or do you remember?

Secretary BAKER. I would not say that he had charge of aircraft at all; he was always a subordinate.

Mr. FREAR. He was always a subordinate, but was it not true that practically all the directions came to Mr. Deeds and from Mr. Deeds, and Gen. Squier usually indorsed them?

Secretary BAKER. I can not answer.

Mr. FREAR. I judge that from the reports and testimony already available.

Secretary BAKER. I do not know.

Mr. FREAR. Mr. Deeds was chief of the Division of Equipment August 2, 1917, and of course it has been asserted here that even in May he was down to Washington, I believe, but I do not know what his connection was. He was not in the Aircraft Division covering that time, as I understand?

Secretary BAKER. No. I think the first contact of Col. Deeds with any governmental work was on a fuse board. That is my recollection of what Judge Hughes says in his report; I had not known that before.

Mr. FREAR. Yes; he and his partner, Mr. Kettering, I believe, was he not?

Secretary BAKER. Mr. Kettering? I do not believe he was.

Mr. FREAR. I am not positive of that myself. Mr. Deeds was the executive, or in the executive division of aircraft January 14, 1918, and so he had been in charge for some little time, under Gen. Squier.

In Mr. Hughes's report, based upon the testimony that was before him, he says that Deeds retained his powers and authority for some time thereafter, until Mr. Potter came in, which was in February, 1918. Do you know when he went out of the service?

Secretary BAKER. I can not answer that definitely; I can give you approximately when it was. After the disposition of the charges against him that grew out of the Hughes report he was retained in the service, but not in an active status, until the disposition of those charges. Then he was discharged from the service. I do not remember how long it was.

Mr. FREAR. He was at his desk here a very short time ago, was he not?

Secretary BAKER. I think not, sir.

Mr. FREAR. The reason I asked that is because one of the Senators, whose name is very conspicuously mentioned in this report, called me up to tell me that he was still here.

Secretary BAKER. The same Senator told me that the other day, and I said it was perfectly incredible and I would find out about it. I inquired about it and found he had not been associated with the service in any way for many months, but there is a man in that office who is said to look like Col. Deeds, and it may be that somebody mistook him for Col. Deeds.

Mr. FREAR. Col. Deeds got the title of colonel simply as a matter of courtesy, I assume?

Secretary BAKER. No; he was an Army officer; he was in the service.

Mr. FREAR. At what time?

Secretary BAKER. I am not certain when that was. There is a letter in this report from him to me in which he says I offered him a commission.

Mr. FREAR. I understand, but he was not in the Army?

Secretary BAKER. He was not in the Regular Army.

Mr. FREAR. He was not in the Army so far as you know prior to the beginning of the war?

Secretary BAKER. No.

Mr. FREAR. And he had never had any military service?

Secretary BAKER. No; he was a temporary officer.

Mr. FREAR. Are you familiar with his record in Ohio?

Secretary BAKER. Well, I have been made familiar with it since these inquiries began, but I knew nothing about it before.

Mr. FREAR. Of course that was a matter of ordinary publicity, I can readily understand, but in the course of your duties would not not have been brought to your attention?

Secretary BAKER. You mean the fact that he was indicted with the National Cash Register people?

Mr. FREAR. Yes.

Secretary BAKER. I had never heard of that until this inquiry began.

Mr. FREAR. That was a prosecution that was held in 1912 in Ohio?

Secretary BAKER. Oh, I was pretty familiar with that at the time. It was a matter of very great public interest in Ohio, but the interest centered around Mr. Patterson, who was the head of that company. Col. Deeds's name may have appeared in the newspapers, but it made no impression on anybody.

Mr. FREAR. Mr. Deeds was quite a conspicuous man out there, was he not?

Secretary BAKER. Yes.

Mr. FREAR. And he had some large business connections; that is, with Mr. Kettering?

Secretary BAKER. Yes; but I learned that after these inquiries began, as I told you.

Mr. FREAR. Since the case was sent back by the court of appeals for a new trial, the only relevancy of that is what would be known in a general way as to charges against a man, his conviction, if he was convicted, the character of the charges, and whether or not they would affect his fitness for filling any certain position. In other words, a man who was charged with defalcation might be perfectly reliable for certain positions, but you would not want to put him in a bank?

Secretary BAKER. If he had been convicted?

Mr. FREAR. If he had been convicted, and these gentlemen were convicted. The decision of the court of appeals, so far as I gather, does not affect that question, but there were 50 exceptions that were presented, and of course, those exceptions were to the indictment and various other things, including admissibility of evidence and the appellate court reversed them. Now, what would you say as to that having any bearing upon the determination of whether a man should be placed in a position of this kind who was charged in the indictment with having bribed, with having monopolized the business of cash register companies at that time, with having crushed opponents—and the testimony was very voluminous on that—he having been indicted by a grand jury and having been convicted by a jury?

Secretary BAKER. Why, I am learning now for the first time that the indictment included any charge of bribery. I did not know that.

Mr. FREAR. I will read one of the grounds on which the court of appeals set it aside, which to my mind should be very interesting to an able Ohio lawyer.

Secretary BAKER. I will say to you in this case, this having been a final appeal, I am sure to agree with you.

Mr. FREAR. I have here a brief reference to it that I think ought to be placed in the record, because it has a bearing on this case.

Secretary BAKER. It was the circuit court that decided that? Was that the Federal circuit court of appeals of Ohio?

Mr. FREAR. Yes; I so understand.

Secretary BAKER. There is not a better court in America than that. If it was the local circuit court I would not know its personnel, but if it was the circuit court of appeals it was a court of the most eminent learning and character.

Mr. FREAR. Here is one of the exceptions that was granted on which the case was reversed. I am reading now from volume 222, page 603, of the report of the Federal court, wherein Cochran was the judge.

Mr. MAGEE. What is the title of the case?

Secretary BAKER. I think it is Robert F. Patterson against the United States.

Mr. FREAR. I do not find the title here. I have the full record at my office. Here is what the court held:

A party monopolizing interstate commerce by employing wrongful means to drive its competitors from the field does not continue to monopolize such commerce, within act July 2, 1890, section 2, by holding the business so securely after its competitors

have ceased to compete; and hence an indictment charging a monopolizing within the period of limitations by holding the business previously obtained by such wrongful means was insufficient, where it did not allege the doing of anything to maintain and hold the monopoly during such period.

In other words, the Federal court declares that after a monopoly has become permanent by defeating all of its competitors and monopolizing the whole business it is no longer subject to punishment, because an allegation that it is doing something to maintain and hold the monopoly is not accompanied by positive testimony, when from the nature of things it controls the whole business after its competitors have been destroyed. Is not that the interpretation you put upon it?

Secretary BAKER. They were, of course, examining the statute. I do not remember.

Mr. FREAR. They were examining the indictment.

Secretary BAKER. They were examining the indictment, which was drawn under the statute.

Mr. FREAR. Yes; drawn under the statute.

Secretary BAKER. The Sherman antitrust law?

Mr. FREAR. Yes.

The grand jurors indicted John H. Patterson, Edward A. Deeds, et al., for the following offenses among others:

First. The inducing, hiring, and bribing of employees and ex-employees of said competitors of said the National Cash Register Co. deceitfully and wrongfully to disclose to said National Cash Register Co. the secrets of the business of the concerns by which they were respectively employed, etc.

Second. The inducing, hiring, and bribing of employees of carters, truckmen, express companies, railroad common carriers, telegraph companies, and telephone companies wrongfully and unlawfully to disclose to said National Cash Register Co. the secrets of the business of such carters, truckmen, express companies, railroad common carriers, telegraph companies, and telephone companies, etc., pertaining to the carriage and transportation of cash registers for all such competitors.

* * * * *

Fourth. The using of influence of said National Cash Register Co. and of its agents with and the making of unwarranted and false statements to banking and other institutions to injure the credit of said competitors and prevent their securing accommodations of money, credit, and supplies convenient and necessary for the carrying on of their business.

Fifth. The instructing and requiring of all sales agents of said National Cash Register Co. to interfere with, obstruct, and prevent in every way possible, sales of such competitive cash register by said competitors and by agents of said competitors and by dealers, etc.

The indictment continues and covers several pages. The first count concludes with the following statement:

And so the grand jurors, aforesaid, upon their oath aforesaid, do say that John H. Patterson, Edward A. Deeds, et al., during the three years next preceding the finding and presentation of this indictment at and within said western division and southern district of Ohio, unlawfully and knowingly engaged and consciously participated in a corrupt conspiracy in undue, unreasonable, direct, and oppressive restraint of said interstate trade and commerce among the several States in cash registers and one which has restrained that trade and commerce by unfair, oppressive, tortious, illegal, and unlawful means and means which have unlawfully and irresistibly precluded others from engaging in that trade in commerce, etc.

The second count against the said John H. Patterson and Edward A. Deeds sets forth substantially the monopolizing of trade and commerce among the several States by the said National Cash Register Co. of the business of sales of cash registers by the means described in the first count of the indictment.

On page 25 of the bill of exceptions appears the statement of the trial judge:

My judgment is that this indictment sets forth the offenses charged with great particularity and that the request of defendants could not be complied with unless the district attorney furnish practically all the evidence he has. To grant the request would not be in furtherance of justice, but rather a serious embarrassment of its administration in this case.

To this indictment the defendants on November 19, 1912, entered the plea of "Not guilty." The jury was impaneled on November 20, 1912. The verdict was filed on February 20, 1913, providing as follows:

We, the jury herein, do find the defendants John H. Patterson and Edward A. Deeds, et al., guilty in manner and form as charged in each of the three counts of said indictment. (Signed) R. E. Morrow, foreman.

A motion was made in arrest of judgment. Thereupon the district attorney moved for sentence, and the court pronounced the following sentences:

That the defendant John H. Patterson pay a fine of \$5,000 and the costs of this prosecution to be taxed, and that he be confined in the jail of Miami County, Ohio, for a period of one year.

That the defendant Edward A. Deeds pay the cost of this prosecution and that he be confined in the jail of Miami County, Ohio, for the period of one year.

Sentence against defendants was deferred upon notice of applying for a writ of error, and John H. Patterson entered into a recognizance in the sum of \$10,000, and the other defendants, including Edward A. Deeds, entered into a recognizance in the sum of \$5,000. The bill of exceptions was filed July 13, 1913, and sets forth the testimony in the case. On the hearing of the bill of exceptions the court sent the case back for retrial.

Secretary BAKER. Was it ever retried, Mr. Chairman?

Mr. FREAR. It was never retried as far as I can learn. Do not misunderstand me. The fact that a man has been indicted and convicted and even served his sentence is not necessarily a reason why he should not be employed for certain kinds of business, and it would be unjust to the employer as well as to the employee to suggest that that was necessarily an objection. But when a man has been charged by a grand jury, as this man was, and convicted by a jury of using such means to throttle the business of others it surely was notice, was it not, that that man's record ought to be inquired into very carefully before he was given a position of responsibility and large powers that might be improperly exercised?

Secretary BAKER. Undoubtedly, Mr. Frear, if I had known that Mr. Deeds was connected with the cash-register trial at the time he was tendered to me for appointment I would have called for that record and would have examined it to determine whether or not he should be appointed. I did not know it at that time; I did not know it until long afterwards. But, incidentally, I think I ought to say that Mr. Patterson and Col. Deeds apparently were tried and fined by a petit jury, and the circuit court of appeals which, as I have told you, is certainly without a superior in America for ability and character, adjudged that conviction bad. It went back apparently to the district attorney, and apparently the difficulties found by the circuit court of appeals were such as to make it appear that a further trial was not possible, so that the case was never tried. I do not know

whether they were discharged or what happened, but as the record stands as to both they were acquitted.

Mr. FREAR. They stand with the case having been sent back for a new trial. But it is a matter of common knowledge, is it not, Mr. Secretary, that in the courts it is almost impossible to secure a permanent conviction under an indictment under the Sherman antitrust law where defendants are men of large means and fight the case?

Secretary BAKER. There has been a good deal of difficulty about that, and I hope you will not misunderstand me about it. I have not any tolerance for some of the engrossing and commercial repression that that indictment charges. Practices of that kind can not be too strongly condemned.

Mr. FREAR. On the record of a case requiring over a month for trial in 1913 it is not surprising that the court of appeals on 50 exceptions that were named found sufficient ground on which to reverse the case, and indicated also that any case that would be prosecuted against these men, no matter what their guilt was, with that length of trial and the difficulties that could be interposed by the defense, could not result in a permanent conviction.

Secretary BAKER. I do not believe that.

Mr. FREAR. Will you suggest to us any case that comes to your mind where a conviction has been affirmed under the Sherman antitrust law in a case where the defendant was as powerful and wealthy as these men were?

Secretary BAKER. I do not have a list of them in my mind, but I am certain I have seen pleas of guilty by men of great prominence in industry.

Mr. FREAR. That may be where it rests with the individual man, but not where the case is tried and defended by such men.

Secretary BAKER. I do not know as to that. I will get the Judge Advocate General to look into that. I think I have a book in the library in my office relating to prosecutions under the Sherman antitrust law.

Mr. FREAR. The reason for presenting this record is this: If it should turn out in the testimony, as suggested by many of the witnesses in the Hughes hearings, and to a large extent by the Hughes report, that Col. Deeds after he came into a position of authority placed contracts with various interests in the city of Dayton, that he concentrated the power so far as he could, or concentrated the authority so far as it could be handled in the city of Dayton, would it not indicate that he was following out his own previous ideas, expressed in the conditions found in the Patterson case, that he felt that that was a right thing to do and something that should have been anticipated by those who appointed him? I am not criticizing you, because I realize you knew nothing about it from your own statement.

Secretary BAKER. I know nothing about it, but if I were addressing my mind to that question I would have examined his record with regard to his previous connection with the National Cash Register Co. and would have done everything to determine the military quality of the man; and I would not have felt free to have put the Government's confidence any more than I would have felt free to put my own confidence into the hands of a man if I were not satisfied

of his military quality. But now, having discovered the fact that Col. Deeds was engaged in that original transaction and coming now to examine the things he did as a Government agent, I would have examined them on their merits, and if I discovered that he was dishonest I would have said so and prosecuted him. If I found he was in error, I would examine whether the error was an innocent error, whether it was one that should be expected to be made under the circumstances, and find out whether the Government profited or lost by his activity. I would not mix that with any prejudice I might have obtained from the previous transaction.

Mr. FREAR. And I suppose you would investigate to see how far his conduct might be due to his temperament and disposition?

Secretary BAKER. If his temperament was disclosed in the original transaction, I would look for traces of it in his subsequent actions.

Mr. FREAR. And if that was true, the tendency on his part would naturally be along those lines of concentration, of placing the power so far as he could in one locality among his friends; and that was true to a large extent, was it not, according to the Hughes findings?

Secretary BAKER. Yes; I think it was. Of course that is open to explanation on these grounds: Every one of us, when we get a big job and want somebody to do it, we think, "Where can I find a man that can do that?" We do not pick up a directory and look through the list of names; we search our recollection for people whom we know.

Take Col. Deeds and Mr. Kettering, for instance. Judge Hughes finds that Mr. Kettering was a man of very great scientific knowledge and ability, but without any business knowledge at all. They tell it of Mr. Kettering that he goes down to a railroad station to take a train and finds out he has not got money enough to buy a ticket. He looks around, sees somebody he knows, and says, "Lend me \$50"—a man of no business capacity at all, but of very great ingenuity.

Now, here we have a new problem, intricate in its mechanical requirements. I cast about to see whom I can get to handle it. Mr. Kettering is a genius. I say, "Now, I know Kettering; I am going to get him for this job," and I do so. It is entirely possible that that is the explanation, instead of its being simply a design to associate his business friends in a profitable enterprise.

Mr. FREAR. That would be true if it rested with Mr. Kettering alone; it would be true if it rested with the Delco system alone; but if it were shown that large orders were given to people who had never taken them before, to the various Dayton industries, some that were started with large advances of Government money, the natural inference would be that this man was carrying these investments to an extent that was not warranted.

Secretary BAKER. I do not think so.

Mr. FREAR. You do not think so?

Secretary BAKER. Mr. Frear, there are three ways to approach a problem of this kind. One is with all the inferences against the honesty of men; another is with all the inferences in favor of the honesty of men; and the third is a perfectly colorless proceeding to get at the truth without any inference either way. Of course we all aim at that last course as the truly judicial course in any inquiry. I can

understand Col. Deeds's having this train of thought in his mind: "Here is a business that is difficult to foresee from the standpoint of profit. It may involve all kinds of losses and wastes if the war comes to an end. I know these people out in Dayton; I can inspire them with my enthusiasm to get things going for the Government." If I were charged with that personally, I would go back to Cleveland, and I would get in touch with a lot of broad-minded, patriotic men there and say, "Here, gentlemen, is something you can do for your country. You may not make any money; you may lose money; but come on and do this for your country." That would have been my natural impulse.

Mr. FREAR. And no one would have charged you with having any motive outside of a patriotic impulse.

Secretary BAKER. Probably not, and yet I do not think anybody is safe from being charged with anything.

Mr. FREAR. But if you had the sole interest in a plane or in an engine that was being placed in every American plane—the Delco system; if you had an interest in the factory there—

Secretary BAKER. I think there is a difference though, Mr. Frear. I do not know what the fact is, but Judge Hughes says that the Delco system had been sold to the General Motors Co.

Mr. FREAR. Yes, it had; but Mr. Hughes also says this, that there were 21,000 shares that were held by Mr. Deeds—I think I quote the report correctly—although he wrote you on August 28, 1917, that he had transferred them and yet did not transfer them until about November 1, 1917, when they were transferred by gift to his wife. A very unusual proceeding, we must all admit.

Secretary BAKER. No; I do not think that that is an unusual proceeding, but I would be very glad to have you read the review of that situation that was made for me by Gen. Ansell. I do not know whether that has been brought to your attention or not. After Judge Hughes had made his report and recommended that action be taken with regard to Col. Deeds I felt, and still feel, that my duty as Secretary of War was to punish every wrong, but to protect the innocent even when appearances were against them and I selected Col. Ansell, a man of very acute mind, a very just man, a man with a passion for justice as a matter of fact—I selected him and told him to take all the evidence there was before Judge Hughes and get all the other evidence there was from any source and review those transactions and recommend to me what ought to be done. He associated with him two or three other members of the Judge Advocate General's office, none of whom knew Mr. Deeds—and Col. Ansell did not know him—and they made an analysis of these transactions, which I think you ought to see.

Mr. FREAR. I should be very glad to see it. Here is the situation, Mr. Secretary. Judge Hughes gave five months of his time, at the request of the President, without a dollar's worth of compensation, went over the ground and gathered together all this testimony, with the aid of expert accountants, and made a report in regard to Col. Deeds. I do not know why a man who has the experience of Judge Hughes, a man who sat on the Supreme Court bench and has had the experience he has had—why his judgment should not be as acceptable to you, Mr. Secretary, as that of a gentleman who was in your own department.

Secretary BAKER. There is no question as to that; I am not undervaluing the service of Judge Hughes. But Judge Hughes did not want any injustice done, of course. Judge Hughes was investigating what you are investigating—transactions almost as large as the aggregate business transactions of the United States in times of peace. He had a tremendous record and spent a fabulous amount of time getting it together. I instructed Col. Ansell to take all that Judge Hughes had and to add to it all that was to be found, and I am sure it would be entirely in accordance with Judge Hughes's desire that the investigation be as complete as possible, and that every light be thrown on the matter.

Mr. FREAR. Did you ever notify Judge Hughes that any light had been thrown on the matter?

Secretary BAKER. No; I did not think that was important.

Mr. FREAR. It was not necessary, of course. But does it not impress you, Mr. Secretary, in view of your remark just now, which is a true remark, that expenditures which reached over \$900,000,000 for aircraft, many of them under the control of Col. Deeds, that it was a tremendous responsibility to place in the hands of a man of that kind who had had no experience? No one knew Col. Deeds here; you did not even know him in Ohio. Did it not impress you that it was a tremendous responsibility to place upon such a man?

Secretary BAKER. It was a tremendous responsibility to place on anybody.

Mr. FREAR. Surely. It required the ablest and best men we could get together.

Secretary BAKER. Unquestionably it required the ablest and best man in the world, and then he would have made mistakes no matter who he was.

Mr. FREAR. Let me suggest, right along that line, Mr. Secretary, that I got the statement in regard to Gen. Goethals, wherein we differed as to his length of retirement, and I find that from the month of June, 1917, apparently the time he went out of the Shipping Board, until the month of December he was in private life, and then he was recalled by you to take charge of the Quartermaster Department as I understand it.

Secretary BAKER. I think that is correct.

Mr. FREAR. So that during six months—here was a man named Deeds that no one apparently knew outside of Dayton, and he was given that great power and responsibility when there were men like Gen. Wood, men like Gen. Goethals, and other men that the country knew well, men like Hulbert, of New York, who is a very great enthusiast over aircraft—

Secretary BAKER. The Congressman?

Mr. FREAR. Yes; a splendid man, a man of large abilities, as I believe. There were men that you could have found on every side, and yet a man named Deeds was taken, a man whom the country did not know—you did not know him in the State of Ohio—and placed in charge of this tremendous expenditure of money and preparation which was far more important than the expenditure, the preparation for war of aircraft production.

Secretary BAKER. Mr. Frear, I am perfectly free to admit that it is extremely likely—I can not say it is certain, but it is extremely likely—that more capable men than Deeds could have been found.

Mr. FREAR. Of course you disarm me, because you say you did not know anything about it.

Gen. Goethals might possibly have been secured during this time had the department seen fit to select him. He was available at that time, judging from the testimony given in serial 1, part 6, of the hearings before the Select Committee on Expenditures in the War Department, reading on page 539:

Mr. FREAR. General, you were in charge of the work of the Panama Canal for a number of years?

Gen. GOETHALS. Yes, sir.

Mr. FREAR. That was a matter of notoriety with which the country was acquainted and also your superior officers?

Gen. GOETHALS. Yes, sir.

Mr. FREAR. At that time you had complete control of all the supplies at the canal?

Gen. GOETHALS. Yes, sir.

Mr. FREAR. And you had taken over that duty at that time and with success?

Gen. GOETHALS. Yes, sir.

Mr. FREAR. So far as the country knows?

Gen. GOETHALS. Yes, sir.

Mr. FREAR. What was your business—what were you doing at the outbreak of the war?

Gen. GOETHALS. I gave up the governorship of the canal in January, 1917, and, in view of the fact that there appeared to be no prospects of any active service developing, I applied to retire and I took up the work of consulting engineer in New York and continued in that. I opened up in February; when diplomatic relations were ruptured during that month I was sorry I had taken the action I had. I applied for active service as soon as war was declared and got it by the request of the President to take hold of the Emergency Fleet Corporation, which I held until July.

Mr. FREAR. July, 1917?

Gen. GOETHALS. Yes, sir; and then asked for active service, but was too old.

Mr. FREAR. If you have no personal objections, may I ask how old a man you were at that time?

Gen. GOETHALS. I was 59. So I went back to my practice and started to work again.

Mr. FREAR. In New York City?

Gen. GOETHALS. Yes, sir; and in December I got a telegram that I had been restored to active duty and was to report immediately to Washington.

Mr. FREAR. From whom was the telegram?

Gen. GOETHALS. From the Chief of Staff, Gen. Biddle.

I have been reading from another hearing, when Gen. Goethal's availability was discussed. I do not care to read any further, but that is Gen. Goethal's understanding of the fact, that he was ready to act with the Government; offered to serve and was refused opportunity, and that he was called back after six months to undertake the work of the Quartermaster Department.

Secretary BAKER. I have no very active recollection of that beyond this, and it is not an active recollection. I think Gen. Goethals applied for foreign service, and the question as to whether he was too old for foreign service or active fighting service was, of course, a question that had to be considered, because the experience of everybody was that the younger men would bear the burdens of division command better.

Mr. FREAR. Right at that point, how old is Gen. Pershing, would you say, Mr. Secretary?

Secretary BAKER. I am sorry I do not know.

Mr. FREAR. How old is Gen. Bliss?

Secretary BAKER. Oh, Gen. Bliss is retired; he is 66, I think.

Mr. FREAR. How old is Gen. Squier, would you say?

Secretary BAKER. I could guess only from his appearance. I should think Gen. Squier was about 50 to 53.

Mr. FREAR. I should have thought he was nearer 60.

Secretary BAKER. He may be; I am giving him the benefit of the doubt.

Mr. FREAR. I was wondering whether Gen. Goethals was too old to undertake active service when he was placed by you in charge of the Quartermaster Department in December.

Secretary BAKER. It is perfectly obvious he was not too old to undertake active service, because he rendered extremely active and valuable service.

Mr. FREAR. Reverting again to this, let me read briefly from the Hughes report. Mr. Hughes in the report said:

The defective organization of the work of the aircraft production and the serious lack of competent direction of that work by the responsible officers of the Signal Corps—

That would include, of course, Gen. Squier?

Secretary BAKER. I think it does.

Mr. FREAR (continuing reading):

To which the delays and waste were chiefly due, were matters for administrative correction through unification of effort under competent control.

The provisions of the criminal statutes do not reach inefficiency.

Of course we all agree as to that proposition of law. I continue to read from the Hughes report:

At the inception of the Government's aviation activity in connection with the war and within the sphere of Col. Deeds's important if not commanding influence, his former business associates were placed at once through Government contracts in a position where they had assurance of very large profits upon a comparatively small investment of their own money and in addition were able to secure generous salaries which they charged against the Government as part of the cost of manufacture.

For instance, there was the Dayton-Wright airplane factory; there was the Dayton Laboratories, which had the contract for 20,000 Liberty motors to be equipped with the Delco system as the only possible system of ignition. There was the Domestic Building Co., a contract given to a man who, according to the testimony before Mr. Hughes, had no conception of the work, at a cost, I think, of more than \$3,000,000.

Secretary BAKER. That is Mr. Borglum's testimony of what Mr. Hughes said to him.

Mr. FREAR. No; this is the testimony before Mr. Hughes, furnished by the contractor himself of a contract to this man who undertook the construction of large Government structures there in Dayton. Then there were, in addition, flying fields, some of them, of course, belonging to the Miami Conservancy Association, one of which, I understand, when the water is let in on it will be 40 feet under water.

Secretary BAKER. It will be when the water is let in, but that will not be for a couple of years.

Mr. FREAR. It is possible they allowed that period of time for the building and perfecting of the Liberty motor. But the thought is here, that it was important to get into service as quickly as possibly every known agency of aircraft production that we could use?

Secretary BAKER. Certainly.

Mr. FREAR. The Hughes report further reads:

The evidence with respect to Col. Edward A. Deeds should be presented to the Secretary of War to the end that Col. Deeds may be tried by court-martial under articles 95 and 96 of the Articles of War.

The absence of proper appreciation of the obvious impropriety of transactions by Government officers and agents with firms or corporations in which they are interested compels the conclusion that public policy demands that the statutory provisions bearing on this conduct should be strictly enforced.

It is therefore recommended that the officers found to have had transactions on behalf of the Government with corporations in the pecuniary profits of which they had an interest should be prosecuted under section 41 of the Criminal Code.

To be perfectly fair, I understand that he did not claim that it was conclusively shown Mr. Deeds had that interest, but he did show his relation with all these persons and the secret telegrams that were sent, and of course he was open to the severest criticism.

Further quoting:

Permit me also to suggest that a special division or subdivision of the present Bureau of Investigation in the Department of Justice should be assigned to the consideration of suggested delinquencies in connection with aircraft production, so that the work already done may be appropriately followed up.

The Attorney General in his report on this same subject states:

Of all the members of the aircrafts boards, the one most severely criticized and against whom most charges have been brought has been Col. E. A. Deeds. The evidence does not disclose any violation by Col. Deeds of the criminal laws. In the early part of 1918 public statements were issued with official authority purporting to set out the progress which had then been made in the production of engines and planes and the prospects of the immediate future. These publications were not only misleading, but they contained false statements and were issued in reliance upon information principally furnished by Col. Deeds, who was acquainted with the actual facts. While the conduct of Col. Deeds in this matter was not criminal and can not be said to have affected actual production it was inexcusable and reprehensible.

I also find that Col. Deeds was guilty of censurable conduct in acting as confidential advisor of H. E. Talbott and in conveying information to the latter with respect to the transaction of business between the Dayton-Wright Airplane Co. and the division of the Signal Corps of which Col. Deeds was the head.

Whether or not Col. Deeds should be subject to disciplinary measures for the acts referred to is a matter to be determined by the War Department. I acquiesce in the recommendation of Judge Hughes that the facts be submitted to the Secretary of War.

I have here a further statement from the Hughes report, which I will read, in regard to the Delco system, which throws a light upon Mr. Deeds's personal relations with that company at that time:

The significance of Col. Deeds's statement with respect to the disposition of his interests in these corporations is that the Delco ignition system is used in the airplane engine known as the Liberty motor. In the planes manufactured abroad the magneto ignition system had been used and prior to its use on the Liberty motor it appears that the Delco system had not been employed on an airplane engine. In the specifications for the Liberty motor, the Delco system was required to be installed with the first 20,000 engines. As already stated, the Delco system is controlled by the Dayton Engineering Laboratories Co. (Delco Co.) and this company is owned by the United Motors Corporation.

On the sale of his Delco stock to the United Motors Corporation Deeds had received in addition to cash, 30,000 shares (no par value) of its stock. (The total issued stock amounted to 1,200,000 shares.) After certain distributions, he still held at the time in question 17,500 of these shares. He also had an interest in a pool of certain shares, on which 3,880 additional shares were received in November, 1917.

In his letter to the Aircraft Production Board, Deeds stated that he had severed his official connection with the United Motors Corporation and had made a bona fide transfer of his shares. He had resigned as vice president and director on August 16, 1917.

The only transfer made by him of any of his shares in that company was by gift to his wife. He indorsed for transfer the certificates for 17,500 shares on October 13, 1917, and they were transferred to Mrs. Deeds' name on October 17, 1917.

That is the record of the Hughes report in regard to Col. Deeds, who had charge of aircraft production from early in the spring of 1917 until it was taken over by Mr. Potter.

To show the estimation that was placed upon him by others in authority in the Signal Corps, I read from the Evening Star of Saturday, December 21, 1917:

Friends and associates of Col. E. A. Deeds on the Aircraft Board gave him a rising vote of confidence at a dinner at the Army and Navy Club last night. Gen. George O. Squier, one of the speakers, declared that if Col. E. A. Deeds had not done "irregular" things the United States would not have had an air fighting force worthy the name.

Gen. Squier said Col. Deeds had demonstrated the superiority of the Liberty motor, and had thus made a contribution to the nation and to the nation's allies which would and ought to outweigh any consideration of ordinary regularities.

"We had to build up from zero," said Gen. Squier, "We started with nothing, and to accomplish anything it was necessary to ignore what in the past has been regarded as regular procedure."

Mr. MAGEE. Does not that report of the evidence show that he had something to do with the purchase of an aviation field at Dayton?

Mr. FREAR. One of the fields, I think it was the McCook field; one of the fields that Col. Deeds rented to the Government was under the Miami Conservancy Association.

Secretary BAKER. No; there were two fields at Dayton. One of them substantially belonged to Col. Deeds, and that field was rented to the Government at a dollar a year for three years. Of course the dollar was never paid.

Mr. MAGEE. Were not some moneys expended upon aviation fields there at Dayton through him or through his recommendation?

Secretary BAKER. Fields which belonged to him?

Mr. MAGEE. In which friends of his were financially interested?

Secretary BAKER. Fields in which friends of his were financially interested, yes.

Mr. MAGEE. I am only refreshing my recollection somewhat after reading the evidence, but I read somewhere that those transactions occurred and a large portion of the fields were swamp lands that were absolutely unfit for aviation purposes or as training fields. The chairman may have read it. I was inquiring whether it was in this record or not.

Secretary BAKER. The evidence to which he refers, Mr. Frear, is, I think, in the Thomas hearings. Senator Thomas and his associates went to Dayton, and they went out to the field in the country on the conservancy grounds. At the time they were there it was soggy, pretty wet, and Senator Thomas asked me as to whether that field was not under water part of the time, and the impression got abroad that it was a badly selected field because of its lying very low. I think it is the Mad River that runs by it and overflows some portions of it at times. The general judgment at the end was that while the field had swampy spots in it it was a very excellent field. But I may be wrong about that.

I do not think that was involved in transactions by Col. Deeds. That was the Miami Conservancy Commission which was authorized by the State of Ohio immediately after the Dayton flood, and the purpose of that commission was to buy land along the Mad River and impound the waters in the dry season so as to prevent a recurrence of those floods.

Mr. MAGEE. I presume we will come to that in the evidence. I know the impression left upon my mind from reading was that if he

had done those things they were things that no reasonable man in time of war who had any real interest in his country could approve.

Secretary BAKER. I think you will find that fully discussed in Judge Hughes's report. All of those land transactions are fully discussed there. I have not refreshed my recollection about them, but they are fully discussed.

Mr. FREAR. The material thing, you will see, Mr. Secretary, is that at the time when we were engaged in war and when every patriotic citizen was doing his utmost to help carry on the war, whether by buying bonds or by serving at the front, or in any humble capacity, here was a man who had charge of the aircraft activities—substantially so, as the report of Mr. Hughes shows; that is, under Gen. Squier, who is one of his apologists and enthusiastic supporters, even long after this occurred—giving to his partners, Talbott and others, large contracts, contracts running into a great many millions of dollars, in Dayton, a little place that was not located with any particular advantages so far as has been disclosed by anyone for the construction of airplanes or machinery or for flying fields or anything else.

Secretary BAKER. I think I shall have to defend Dayton a little, Mr. Frear. It is an important city.

Mr. FREAR. I think you might very well defend Cleveland, but as to Dayton—

Secretary BAKER. Dayton is a very important city.

Mr. FREAR. It was, I assume, until it had its flood experiences.

Secretary BAKER. There are very large manufacturing industries in Dayton: The National Cash Register, the Dayton Computing Scale Co., one of the branches of the Maxwell automobile factory. Dayton is a city of 150,000 and it is filled with industries as nearly related to the production of airplanes as any industries we have.

Mr. FREAR. Would you say that as compared with Detroit?

Secretary BAKER. Of course, in that respect Detroit is the principal city in America—Detroit and Buffalo.

Mr. FREAR. Many cities might be mentioned, but here was this man permitted to center all these activities in the city of Dayton, these tremendous appropriations, among his partners, his associates in business, and what was the reason? If Mr. Kettering was not a man who had ordinary business judgment, if he would go to the train and have to borrow \$50 to buy his ticket—

Secretary BAKER. Why, Kettering was never given control of any financial or business arrangements about the Liberty motor.

Mr. FREAR. I understand, but you know a man of that kind, a dreamer—

Secretary BAKER. Mr. Kettering is the kind of man who has dreams that come true. He was a successful inventor.

Mr. FREAR. No one gives Mr. Kettering credit for being the sole inventor of the Liberty motor?

Secretary BAKER. Oh, surely not.

Mr. FREAR. He simply gave the results of his experience to Vincent and many others.

Secretary BAKER. Oh, do not misunderstand me; I do not disagree with you anywhere. I think the fact that Col. Deeds was a business man and was from Dayton and was the personal friend and business associate in other transactions of a lot of these people who subse-

quently turned up with contracts is a perfectly proper subject of inquiry, and I think it ought to be inquired into.

Mr. FREAR. I appreciate, Mr. Secretary, that you are very fair in your position in this matter.

Following Mr. Deeds, Mr. Potter came into the Aircraft Board?

Secretary BAKER. Yes.

Mr. FREAR. What were the qualifications of Mr. Potter, or what was the reason, can you state, Mr. Secretary, for his selection?

Secretary BAKER. I can not, Mr. Frear. I do not happen to remember at this moment where Mr. Potter came from or what his previous relations were.

Mr. FREAR. In making up the record and ascertaining just who these people were—and I am glad to be corrected if I offer any statement that is not absolutely accurate—Mr. Potter's connections are stated in this official document, Aircraft Production Facts, official Army publication we have here, by Mixter. Reading from that very briefly on page 9, he says:

In January, 1918, W. C. Potter, of the Guggenheim interests, became Chief of the Equipment Division. When the Air Service was separated from the Signal Corps in May, 1918, John D. Ryan, of the Anaconda Copper Co., was appointed Director of Aircraft Production and later an Assistant Secretary of War, and Director of Air Service. Mr. Potter continued as First Assistant Director of the Bureau of Aircraft Production, A. A. Landon, of the American Radiator Co., assisting on production, and C. W. Nash, of the Nash Motors Co., in engineering.

Landon was the witness that was described in Mr. Hughes's report, which I read from this morning in regard to his judgment of appalling inefficiency back in October, 1917, and then six months later he said that no improvement had been made. That was, of course, after Mr. Potter was in control of matters. Who appointed him, do you know?

Secretary BAKER. I do not recall that. Mr. Ryan was my personal selection.

Mr. FREAR. But Mr. Potter was not?

Secretary BAKER. Mr. Potter was not.

Mr. FREAR. Mr. Potter was in charge from February, 1918, until Mr. Ryan came in, which, I think, was in January?

Secretary BAKER. Yes.

Mr. FREAR. Mr. Potter, according to the statement I have here, is connected with an even 20 great corporations, largely copper corporations of the Guggenheim interests. He is a director of the Kennecott Copper Corporation. They were engaged in transactions for the Government. In 1915 his company, the Kennecott Copper Corporation, made a net income of \$7,709,503. In 1916 it jumped to \$22,540,436.

He was connected with the Utah Copper Co. In 1915 the Kennecott Copper Corporation declared an interest of \$4,045,040 in that company's stock. Their profits jumped from \$7,172,991 in 1914 to \$39,738,675 two years later.

My attention was called to a statement of Speaker Clark which was made on the floor of the House in a discussion when Mr. Baruch fixed the price of copper. Mr. Clark said, according to this report:

The Utah Copper Co. made a report to its stockholders that it could put copper on board cars at 5½ cents a pound, and Mr. Baruch thinks we have brought it down to 16 cents.

Later in the war, let me say by way of parenthesis, the President raised it to 26 cents. Again Speaker Clark says:

Why does not the Attorney General of the United States proceed against these fellows that put it up to 30 cents? I am willing to give Baruch credit for pulling it down from 30 to 16 cents, but he did not pull it down far enough, and the Attorney General could put every one of those fellows into jail between now and Saturday night who kept the price up.

According to another statement I have here, the price was controlled very largely by two or three individuals in the copper business. Mr. Potter was one, as I understood it—

Secretary BAKER. That is out of my range of facts entirely, Mr. Frear.

Mr. FREAR. Mr. Potter was the president of the Braden Copper Mines Co. He was connected with the Utah Copper Co., and also with the Kennecott Copper Corporation, and was also a director in the Guaranty Trust Co. of New York with Mr. Ryan.

This is a brief statement—I do not care to insert in full Mr. Clark's statement, but the statement in regard to Mr. Potter I desire to offer for the record.

Secretary BAKER. Perhaps you do not intend to ask me a question about it?

Mr. FREAR. I shall be very glad, if you know anything about it.

Secretary BAKER. I do not know anything about it, but I am wondering what connection there is between the price of copper and the employment of Mr. Potter in the equipment section.

Mr. FREAR. That is just what I would like to know, Mr. Secretary, if there was anything in his previous experience that qualified Mr. Potter to take charge of aircraft production in the United States?

Secretary BAKER. I do not know who recommended Mr. Potter. When I first knew him he was in the equipment section. I had many conferences with him, and conferences at which he was present, and he impressed me as being an extremely efficient person. After Mr. Ryan came in as Director of Air Service, and later while he was Assistant Secretary of War, I had frequent occasion to speak with him about Mr. Potter and he always spoke in the very highest terms of his efficiency and zeal.

Mr. FREAR. Well, they were both working together practically; they were both in the copper business; both directors of many companies, as I understand.

Secretary BAKER. Directors in the same companies?

Mr. FREAR. I think they were.

Secretary BAKER. I did not know that.

Mr. FREAR. They were directors of the Guaranty Trust Co.; I do not know that they were of the copper companies.

Secretary BAKER. I did not know they were on any of those directorates together.

Mr. FREAR. I agree with you that Mr. Ryan has expressed that opinion of their association because it appears in the record; Mr. Ryan followed Mr. Potter?

Secretary BAKER. Yes, sir.

Mr. FREAR. This statement is taken from Moody's Manual; the same statement appears in all the public utility reports; it can be found in any of them. His associations are taken from the Directory of Directors, and I am quite sure they are right.

Secretary BAKER. I have no disposition to question it, sir. I do not know anything about it.

Mr. FREAR. If any correction is made I shall be glad to have it placed in the record.

(The statement referred to is here printed in full, as follows:)

William C. Potter, of the firm of Guggenheim Bros., 120 Broadway, is director in the following-named companies:

American Congo Co.
 American Transportation Co.
 Braden Copper Co. (president and director).
 Chile Copper Co.
 Chile Exploration Co.
 Chile Steamship Co.
 Continental-Mexican Rubber Co.
 Continental Rubber Co. of New York (chairman board of directors).
 Copper River & Northwestern Railroad Co.
 Great National Mexican Smelting Co.
 Guaranty Trust Co. of New York.
 Guggenheim Smelting Co.
 Intercontinental Rubber Co. (chairman of board of directors).
 Mexican Union Railroad Co.
 Nevada Consolidated Copper Co.
 Richmond Radiator Co.
 Sherman Steamship Co.
 Utah Copper Co.
 Intercontinental Transportation Co.
 Kennecott Copper Corporation (chairman of board of directors).

[W. C. Potter, president and director, Braden Copper Mines Co.]

Stock issued, \$12,953,530.

December, 1915, 99 per cent of Braden stock exchanged for Kennecott stock.

[W. C. Potter, director Kennecott Copper Corporation.]

Company owns \$4,817,400 stock Copper River & Northwestern Railway Co., \$1,300,000 stock Alaska Steamship Co., \$12,768,290 stock Braden Copper Mining Co., \$4,045,040 stock Utah Copper Co.

	Value output.	Net Income.	Dividends.	Surplus.
1915.....	\$10,656,847	\$7,709,503	\$15,000,000	.....
1916.....	28,752,857	22,540,436	15,320,283	\$12,341,431
1917.....	19,283,481	17,964,902	10,311,665	8,596,443

Director, Guaranty Trust Co., trustee for the Chicago, Milwaukee & St. Paul Railway Co. (See J. D. Ryan.)

[The Utah Copper Co., a corporation formed under the laws of New Jersey, June 30, 1904.]

In 1915 the Kennecott Copper Corporation acquired an interest of \$4,045,040 of the company's stock. Authorized stock, \$25,000,000; issued, \$16,244,900. The Kennecott Copper Corporation owns approximately one-quarter of the total issue.

	Gross.	Net.	Dividends.	Depreci- ation.	Surplus.
1914.....	\$16,222,450	\$7,172,901	\$4,627,895	\$523,851	\$3,326,756
1915.....	27,155,943	17,913,481	6,904,082	546,733	10,462,665
1916.....	50,280,073	39,738,675	19,493,880	589,731	19,655,063
1917.....	48,797,423	29,985,125	23,555,105	1,289,629	5,140,391

The Braden Copper Mines Co., a corporation formed under the laws of Delaware, May, 1909.]

The company owns all the securities of the Braden Copper Corporation, a Maine corporation organized in 1904. That company has a copper mining property of 1,251 acres in Chile. Estimate of ore reserves January, 1915, 113,694,000 tons. In December, 1915, the Kennecott Copper Corporation acquired 99 per cent of this company's stock, exchanging Kennecott Copper stock therefor.

Stock authorized, \$12,953,530; issued, \$12,953,530.

President, W. C. Potter, New York; vice president, Stephen ———, New York; vice president, William Pierson Hamilton, New York; secretary, C. K. Lipman, New York; treasurer, L. Frederick, New York; assistant treasurer, A. Hirschthal, New York; assistant secretary, C. E. Moran, New York.

Directors: Stephen Birch, New York; William Braden, New York; S. J. Clark, New York; Thomas Cochran, New York; E. A. Guggenheim, New York; H. F. Guggenheim, New York; William Pierson Hamilton, New York; H. C. Havemeyer, New York; Messmore Kendall, New York; W. C. Potter, New York; Seward Prosser, New York.

[Kennecott Copper Corporation, a corporation formed under the laws of New York, Apr. 29, 1915.]

In 1915 the corporation acquired the entire \$4,817,400 stock of the Copper River & Northwestern Railway Co., which is a standard gauge railway from Cordova, Alaska, to Kennecott, 131 miles. The corporation also owns \$1,300,000 of the \$3,000,000 stock of the Alaska Steamship Co., which has a fleet of six freight and eight passenger steamers plying between Alaska points and Puget Sound ports.

In January and February, 1916, the corporation acquired \$12,768,290 of the \$12,973,500 stock of the Braden Copper Mining Co. It also acquired from the Guggenheim Exploration Co. \$4,045,040 stock of the Utah Copper Co. (See statements of these companies.)

Stock No. Par Authorized, 3,000,000 shares Issued, 2,787,028 shares.

In the period from May 27, 1915, to December 31, 1915, the company produced 57,555,183 pounds of copper, the gross value of the metal output being \$10,656,847, net income, \$7,709,503.

In 1916, gross was \$28,752,857; net, \$22,540,436; dividends, \$15,320,283; surplus, \$12,341,431. In 1917, gross was \$19,283,481; net, \$17,964,902; dividends, \$10,311,665. The undivided profits December 31, 1917, were \$8,596,443.

Directors: Stephen Birch, New York; Samuel J. Clarke, New York; Thomas Cochran, New York; E. A. Guggenheim, New York; H. F. Guggenheim, New York; William Pierson Hamilton, New York; H. O. Havemeyer, New York; Seward Prosser, New York; William C. Potter, New York.

Mr. Ryan followed on May 20, 1918, and he was in control until December?

Secretary BAKER. Until he resigned as Second Assistant Secretary of War; yes.

Mr. FREAR. He was appointed by yourself?

Secretary BAKER. He was my personal choice; yes, sir.

Mr. FREAR. May I ask, Mr. Secretary, what was the reason for appointing him? What qualifications did he possess?

Secretary BAKER. Well, I came to know Mr. Ryan when he was in the American Red Cross. He came down here to Washington and took up his residence here and worked in the organization of the American Red Cross, and I came to know him in that connection.

Mr. FREAR. When was that, would you say?

Secretary BAKER. Oh, I can not answer that; it was during the war.

Mr. FREAR. In 1917 or 1918?

Secretary BAKER. I can not answer that, sir. Somebody suggested that he would be an appropriate person to put in at the head of that enterprise. I made all the inquiries that a man circumstanced like me would have to make and such as a man who knew the business

men of the country generally would not have to make, and I found that Mr. Ryan was regarded generally as one of the great business executives of the country. I think I do nobody's reputation an injustice when I say he was one of the great business executives of the country.

Mr. FREAR. It was because of his general qualifications in a business way that you appointed him?

Secretary BAKER. Yes, and because he was free.

Mr. FREAR. Not because of any knowledge of aircraft or anything of that kind?

Secretary BAKER. No; although I had Mr. Ryan over and talked with him a good many times about the aircraft problem and found that he was very enthusiastic about its possibilities.

Mr. FREAR. Particularly after his appointment?

Secretary BAKER. Yes, when I was asking him to take up the work. It was not a grateful task then, Mr. Frear. There had been a lot of criticism and comment. Everybody connected with the aircraft production was hurt and wounded in their feelings. A very large number of people who had been doing their level best and hoped that they were contributing to our success were beginning to doubt it, and it was very difficult to get a man of large affairs and established reputation to take up what seemed to be an unpopular cause. I talked the matter over with Mr. Ryan, and he said, "This thing ought to be done, and if you want me to do it I will do it." I told him I did want him to do it, and he did.

Mr. FREAR. He was Assistant Secretary of War part of the time?

Secretary BAKER. An Assistant Secretary of War afterwards.

Mr. FREAR. After he went out of the Aircraft Production Board?

Secretary BAKER. It was merely a change of relation rather than a change of occupation. He was Director of Air Service, and then he was made Second Assistant Secretary of War, and remained in charge of Air Service as director. But he did nothing else as Second Assistant Secretary of War except deal with air matters.

Mr. FREAR. He was there until December, or about that time, 1918?

Secretary BAKER. It was some time after the armistice that he resigned.

Mr. FREAR. Up until after the armistice? Mr. Ryan testified in the Thomas hearings. There was an inquiry of him in regard to Mr. Potter and others, and Mr. Ryan testifies, on page 1145 of the Thomas hearings:

Mr. Potter is assistant director, with general duties as my assistant. I have said, without making a direct order to that effect, "You must consider me and Mr. Potter as one man." In my absence Mr. Potter speaks for me, and any act of Mr. Potter's is my act. Mr. Nash acts as assistant to the director in charge of engineering and production. * * *

Senator REED. What was his [Mr. Potter's] occupation or business before he came in?

Mr. RYAN. He was in the mining and metallurgical business and connected with the Guggenheims.

Senator REED. And never had anything to do with aircraft?

Mr. RYAN. I think not.

Senator Reed then inquired about Potter, Kellogg, Mixter, Wolff, Lockwood, Leadbetter, and Maj. Downey, who was Mr. Ryan's assist-

ant in aircraft production. That is on page 1152. Then Senator Reed said:

There was not a single one of those men who had had experience, so far as you know, in aircraft production?

Mr. RYAN. Not so far as I know.

That is to say, Mr. Ryan was surrounded with Potter, Kellogg, Mixter, Wolff, Lockwood, Leadbetter, and Maj. Downey as his assistants, and not one of these men had ever had any experience in aircraft production.

Secretary BAKER. I do not know what that means. If it means that they had not been engaged in the manufacture of aircraft it is certainly so.

Mr. FREAR. On page 1153 I again read:

Senator REED. You asked for a new appropriation and got it, did you not?

Mr. RYAN. Yes, sir. * * * The appropriation asked for was a lump appropriation to cover the Department of Military Aeronautics and the Bureau of Aircraft Production. It was \$1,032,000,000.

* * * * *

Senator REED. And \$640,000,000 would make \$1,672,000,000 that has been appropriated up to this date for aircraft?

Mr. RYAN. That has been appropriated up to this date to carry us until June 30 of next year.

Page 1162:

Senator REED. I say, as a matter of fact, we have not a single American-made fighting machine to-day on the front?

Mr. RYAN. I think that is true.

Senator REED. As a matter of fact, we have not a single American-made fighting machine anywhere, have we?

Mr. RYAN. I think that is true; that is, that is finally accepted.

Mr. MAGEE. Where does all this efficiency come in?

Secretary BAKER. As to Mr. Ryan?

Mr. MAGEE. No; I mean in the Aircraft Service generally. You say we did not produce a fighting plane or bombing plane in a year and a half.

Secretary BAKER. We were not starting to make fighting planes; there was no suggestion that we should make fighting planes for the greater part of that year and a half. The answer to that question, of course, is an answer to your whole inquiry. The first suggestion that was made by anybody from the other side was that it would be unwise for us to try to make fighting planes and bombing planes. America's first task was to furnish herself with her training planes so that after adequate study had been given to the problem we might undertake the manufacture of fighting and bombing planes, but that was a matter for later consideration. So at the outset the American program did not contain any provision for fighting planes. Later that was taken up, and the De Haviland 4 was the first answer to that. We were not in this war very long.

Mr. MAGEE. Well, we were in it from April 4, 1917, up until the present time.

Secretary BAKER. Until November, 1918.

Mr. MAGEE. That was the date of the armistice. Do I understand that during all that time over there our forces did not have fighting planes?

Secretary BAKER. Oh, no; we had fighting planes that we bought from the French and from the British. That was one of the embar-

rassments that you will find written into the record everywhere. At the outset the French and British thought they could supply us with fighting planes, but they stipulated that we would supply certain tools and replacement material. After a while they found the pressure on them was so great they could not supply us with as many as we needed, and they said it was partly because we could not supply the replacement material and the tools.

Mr. MAGEE. Were there actually times when our forces in the field in France did not have sufficient fighting planes and bombing planes?

Secretary BAKER. I can not answer that, because "sufficient" does not mean anything.

Mr. MAGEE. Well, could anybody in the department answer that?

Secretary BAKER. Nobody in the department could answer that, because "sufficient" is an impossible term. There never was a time when the French, British, and Americans, any one or all of them could not have used more planes than they had.

Mr. MAGEE. I understand that, but were there times when the demands of our officers there for fighting planes or bombing planes were not met?

Secretary BAKER. Oh, surely.

Mr. MAGEE. So that there were times when they were not supplied with the number of planes which the officers believed that they needed?

Secretary BAKER. There never was a time when they were supplied with all the planes that they would have desired to have if they could have gotten what they asked for.

Mr. MAGEE. Well, but a reasonable supply?

Secretary BAKER. They were supplied with what we could get.

Mr. MAGEE. And we could not get any?

Secretary BAKER. We got some from the French and some from the British.

Mr. MAGEE. That is the point exactly. I may be mistaken, but it seems to me this whole Aircraft Service, so far as the United States has been concerned in this war, has been to a very great extent a pitiable tale. We did not accomplish the results which we expected to accomplish in any reasonable degree. That is an impression I have.

Secretary BAKER. You are right when you say we have not achieved the results we expected to accomplish.

Mr. MAGEE. Now, Mr. Secretary, who in the department will know exactly what we did do and what results we did accomplish and be able to give information as to the relative results accomplished in the Aircraft Service as between, say, France, Great Britain, Italy, Germany, and the United States?

Secretary BAKER. Gen. Squier and Gen. Patrick will, I think, be able to answer every phase of the question you have just suggested.

Mr. MAGEE. My questions are prompted by a desire for information and because I am intensely interested in aviation, because I believe that in the event of a future war aviation is likely to be the most important instrument for the protection of the country.

Mr. FREAR. What is Gen. Squier's position to-day?

Secretary BAKER. Chief Signal Officer.

Mr. FREAR. Is he directly connected with the Aviation Corps?

Secretary BAKER. He has nothing to do with it whatever.

Mr. FREAR. I do not quite understand, Mr. Secretary. Did you say that our aircraft program did not include the preparation of anything but training planes?

Secretary BAKER. At the outset. The first advice we received was that we should limit ourselves to training planes.

Mr. FREAR. At what time was that?

Secretary BAKER. I read that on the way down here. I think that was the first suggestion made by Maj. Bolling, was it not?

Mr. FREAR. Maj. Bolling proposed British planes—

Secretary BAKER. On page 71 of the Hughes report I find the following:

Maj. Bolling's report was sent from Paris on August 15, 1917. The governing principle for the American production program was stated by Maj. Bolling to be:

First. The United States must first provide itself with all airplanes and engines required for training purposes in America.

Second. The United States must next provide the airplanes and engines necessary for use strictly in connection with the operation of American forces in the field. It is best known in Washington what will be the size and composition of the American forces in the field at any given dates in the future. You have the information as to the number of types of airplanes required in direct connection with military operations of these forces. We have learned nothing to change the views on that matter which were held by Maj. Poulis when we left Washington.

Third. After these first two considerations comes the American program of putting into the field next year air forces in excess of the tactical requirements of its Army in France. It is greatly desired that the United States shall be able to do this. Such air forces should consist of fighting aeroplanes and bombers.

Mr. FREAR. Now, Mr. Secretary, I read into the record this morning from the testimony of Col. Clark, who you agreed was one of the ablest men we had in the Air Service, who was with the Bolling Commission. In June he cabled to the War Department to prepare three British machines, and two different French machines, and the Caproni Italian machine. Six different kinds of airplanes. All were fighting machines.

Secretary BAKER. Bombing machines, not fighting machines.

Mr. FREAR. Not pursuit planes, but used for general purposes, not training purposes. Did that suggest that we were to confine the program to training planes?

Secretary BAKER. I did not say that. I am afraid I have been misunderstood.

Mr. FREAR. Possibly.

Secretary BAKER. I said that at the outset the situation was that we should buy, first, the training planes for the United States, and that latter we should take the fighting planes.

Mr. FREAR. How long did that policy govern the department?

Secretary BAKER. I can not answer that; Gen. Squier can tell you. Cablegrams came every day in great numbers from France. I have looked everywhere for the Bolling record of August, 1917.

Mr. FREAR. Oh, long before that you had ordered the spads to be manufactured by the Curtiss Aeroplane Co.?

Secretary BAKER. Yes.

Mr. FREAR. And those were fighting planes?

Secretary BAKER. Yes.

Mr. FREAR. And those were cancelled afterwards?

Secretary BAKER. For some reason that did not work out.

Mr. FREAR. What I mean is this. You were extending the program by reason of Col. Clark's recommendations, which were after-

wards approved by Maj. Bolling's recommendations when he cabled over in June, and you asked for spads at the beginning and placed contracts which were afterwards canceled. So it must have been the purpose to continue with fighting planes and bombing planes and have them manufactured at the same time——

Secretary BAKER. Undoubtedly that was true.

Mr. FREAR. So if this was your program at the outset it was modified very quickly?

Secretary BAKER. Oh, surely.

Mr. FREAR. It appears that everything was dropped—I am asking this as a question. Afterwards, it appears, everything was dropped until the De Haviland Four could be furnished?

Secretary BAKER. That I do not know. General Squier can tell you how often the plan was changed, why it was changed, and what consultations took place both here and abroad, but the plan obviously was changed from time to time.

(Thereupon, at 4.35 o'clock p. m., the subcommittee took a recess until 7 o'clock, p. m. the same day.)

SUBCOMMITTEE No. 1 (AVIATION) OF THE
SELECT COMMITTEE ON EXPENDITURES IN THE
WAR DEPARTMENT, HOUSE OF REPRESENTATIVES,
Friday, August 1, 1919.

The subcommittee met at 10 o'clock a. m., pursuant to adjournment last night, Hon. James A. Frear (chairman) presiding. Also present Hon. Walter W. Magee and Clarence F. Lea.

TESTIMONY OF HON. NEWTON D. BAKER, SECRETARY OF WAR—Resumed.

Mr. FREAR. I will ask to have inserted into the record, in connection with the testimony of Mr. Ryan quoted on yesterday, where Senator Reed was examining him, an excerpt from volume 2, page 1151 of the Thomas subcommittee Senate hearings, Sixty-fifth Congress, second session, as follows:

Senator REED. Mr. Ryan, you took over the various forces that you found on hand to a large extent, did you not?

Mr. RYAN. I took over the Equipment Division of the Signal Corps. That was the principal force.

Senator REED. How many men were there in that division?

Mr. RYAN. There were hundreds. I do not know just how many.

Senator REED. Who were the leading men besides those you have named?

Mr. RYAN. Mr. Potter was chief. Mr. Kellogg was his assistant. Maj. Wolff, I think, was in charge of the finances; Maj. Brown was his assistant. Mr. Fletcher was in charge of purchases and contracts. Maj. Downey was in charge of disbursements. Mr. Lockhart was in charge of raw materials. Col. Mixter was in charge of product on. Maj. Leadbetter was in charge of the supply of wood. I think those cover the principal activities.

Senator REED. How many were Regular Army officers and how many were civilians who got into Army uniforms.

Mr. RYAN. I can not say positively. I am not sure, but I think Maj. Downey was the only Regular Army officer in the list I have mentioned.

Senator REED. The rest were civilians?

Mr. RYAN. Yes, sir.

Senator REED. Mr. Potter came in from civil life?

Mr. RYAN. Yes, sir.

Senator REED. What was his occupation or business before he came in?

Mr. RYAN. He was in the mining and metallurgical business and connected with the Guggenheims.

Senator REED. And never had anything to do with aircraft?

Mr. RYAN. I think not.

Senator REED. What was Mr. Kellogg's business?

Mr. RYAN. Mr. Kellogg was a manufacturer. I do not know just what he manufactured, but I think he was a metal manufacturer. I do not know exactly what line.

Senator REED. Was he an automobile man?

Mr. RYAN. I think not. He might have made parts for automobiles, but he was not an automobile manufacturer.

Senator REED. Mr. Mixer was in charge of production you say. Who was he?

Mr. RYAN. He is connected with one of the plow companies, I think. I believe it is the John Deere Co. or one of the harvester companies. I do not mean the Harvester Co., so called, but one of the companies manufacturing harvesting machinery.

Senator REED. Mr. Wolff was in charge of finances. Who was he?

Mr. RYAN. I think he was a certified public accountant.

Senator REED. And Mr. Lockhart?

Mr. RYAN. I really do not know what his business was.

Senator REED. And Mr. Leadbetter?

Mr. RYAN. I do not know what Maj. Leadbetter was.

Senator REED. How about Mr. Downey?

Mr. RYAN. I think Maj. Downey was a Regular Army officer.

Senator REED. There was not a single one of these men who had had experience, so far as you know, in aircraft production?

Mr. RYAN. Not so far as I know.

Senator REED. They were men that you think actually had the final say in regard to contracts before you took charge?

Mr. RYAN. Subject, of course, to Gen. Squier, who was Chief of the Signal Corps. They were all under him.

Senator REED. Yes. Do you know how much money, approximately, had been expended at the time you took charge in the production of aircraft? When I say "expended," Mr. Ryan, I mean actually paid out or that the Government obligated itself to pay out.

Mr. RYAN. The actual expenditure, up to the time I took charge was something like \$350,000,000.

Senator REED. Do you include in that the commitments?

Mr. RYAN. No; the actual expenditures. The commitments beyond that were sufficient to absorb all of the appropriation that had been made the year before of \$640,000,000. However, a good part of these commitments or a considerable part of these commitments, over and above actual expenditures, were for things for which they would be reimbursed. For instance, take the production of things for the Allies and that the Equipment Division would be reimbursed for when they completed deliveries on work that they were doing, principally for the Allies; but the commitments plus the actual expenditures had reached a total of the appropriation of the year before, so that I was unable from the time I took hold until the new appropriation bill passed to authorize or approve any contracts for material.

Senator REED. You asked for a new appropriation and got it, did you not?

Mr. RYAN. Yes, sir.

Senator REED. How much was it?

Mr. RYAN. The appropriation asked for was a lump appropriation to cover the Department of Military Aeronautics and the Bureau of Aircraft Production. It was \$1,032,000,000.

Senator REED. The new appropriation?

Mr. RYAN. Yes. That was afterwards subdivided between the two departments.

Senator REED. And \$640,000,000 would make \$1,672,000,000 that has been appropriated up to this date for aircraft?

Mr. RYAN. That has been appropriated up to this date to carry us until June 30 of the next year.

Senator REED. What are the Government's commitments and expenditures up to this time, as nearly as you could tell?

Mr. RYAN. I have not got them accurately. I have been away four weeks, and I have not got them accurately. I would not like to state it. I can get it for you later.

Also, at the top of page 1162, the following quotation:

Senator REED. This is true, anyway, is it not, that we were capable of quantity production of the 150 horsepower Hispano-Suiza, is that right?

Mr. RYAN. Yes, sir.

Senator REED. It is also true that that engine works admirably in the Spad machine, which was an up-to-date fighting machine?

Mr. RYAN. I think so.

Senator REED. It is a machine that is still used by the French and is regarded as one of the best machines?

Mr. RYAN. That is true.

Senator REED. As a matter of fact, we have not a single American-made fighting machine on the front.

Mr. RYAN. I think that is true.

Senator REED. I say, as a matter of fact, we have not a single American-made fighting machine to-day on the front?

Mr. RYAN. I think that is true.

Senator REED. As a matter of fact, we have not a single American-made fighting machine anywhere, have we?

Mr. RYAN. I think that is true; that is, that is finally accepted.

Secretary BAKER. Mr. Chairman, before you proceed with fresh inquiries, let me say, I am told that one or two copies of the memorandum of Gen. Ansell, with regard to the Deeds inquiry, have been supplied to the committee.

Mr. FREER. To my committee?

Secretary BAKER. I understand so.

Mr. FREAR. That is, will be furnished.

Secretary BAKER. No; the committee is said to have two copies of the memorandum?

Mr. LEA. I suggest that it was probably sent to Mr. Graham, the chairman of the general committee.

Secretary BAKER. Probably so. I understand they have been in the hands of the committee, perhaps Mr. Graham's hands, for some time.

Mr. FREAR. If that is so, I did not know about it. This is the first that I have heard that such a hearing has been had.

Secretary BAKER. If you will be good enough, Mr. Chairman, to have your clerk inquire of Mr. Graham, and get that memorandum, and insert it as a part of my testimony, I will thank you; and if it has not been furnished to Mr. Graham I will supply a copy for that purpose.

Mr. FREAR. If inserted in the record it might be something like inserting the Hughes testimony.

Secretary BAKER. Oh, no; it is very much briefer than that.

Mr. FREAR. Well, the committee will be very glad indeed to have the paper, and will then determine whether it shall be inserted in the record or not. We will be very glad to have it furnished, and then the committee will decide that matter.

Secretary BAKER. Well, if you decide not to insert it, I will come down here and read it.

Mr. FREAR. We will be very glad to have you do so, and then you might answer any interrogatories that the committee might see fit to propound.

Secretary BAKER. Very well, if that is necessary.

(The statement referred to was subsequently furnished by Secretary Baker and is here printed in full, as follows:)

CONCLUSIONS REACHED UNDER DATE OF JANUARY 16, 1919, BY THE ACTING JUDGE ADVOCATE GENERAL IN THE MATTER OF THE REPORT OF HON. CHARLES E. HUGHES AFFECTING CHARGES MADE AGAINST EDWARD A. DEEDS.

After reciting evidence in the case the following conclusions are reached by Acting Advocate General S. T. Ansell:

The conclusion of this office is, therefore, that Col. Edward A. Deeds should not be tried by court-martial on account of any of the transactions discussed in this memorandum.

The justice of the conclusion thus reached by this office finds confirmation in the following language taken from a letter from Hon. John D. Ryan, Director of the Air Service, addressed to the Secretary of War under date of November 13, 1918:

"I feel, as I stated in a former letter to you, that Col. Deeds performed a great service in expediting the work on the Liberty motor. If he had followed strict regulations and kept within them in the expenditure of money for the production of the first of these model engines we would probably not have had any quantity production yet. I feel that the patriotic service rendered to the Government and the sacrifice made in connection therewith by Col. Deeds outweighed any technical violations that might have occurred, and considering the conditions under which this work had to be done, if the aircraft was to take any part in the war within a reasonable time, I think commendation instead of court-martial should be Col. Deeds's reward."

There are attached hereto the following papers: (a) The memorandum from the Secretary of War referring the matter to this office for report and recommendation, together with the papers attached thereto; (b) indorsement from this office dated November —, 1918, returning to The Adjutant General a memorandum from the Inspector General's Department, dated November 2, 1918, and the accompanying papers; (c) memorandum submitted by this office under date of November 11, 1918, expressing its conclusion based upon the Hughes report; (d) memorandum for Hon. John D. Ryan, Director of Air Service, signed W. W. Montgomery, jr., Chief Advisory and Consulting Department, dated November 11, 1918; (e) memorandum submitted to this office under oath and signed B. F. McCann, attorney for Col. Edward A. Deeds; (f) affidavit of H. E. Talbott, former business associate of Col. Deeds; (g) memorandum submitted to the Secretary of War by John D. Ryan under date of November 13, 1918; (h) letter from Maj. E. A. Coleman, disbursing officer, Bureau of Aircraft Production, to this office under date of November 25, 1918, with exhibits; (i) copy of the Official Bulletin, dated February 21, 1918, containing the newspaper article criticized by Judge Hughes in his report; (j) affidavit of Edward A. Deeds, dated November 20, 1918, together with chronology and copies of correspondence submitted by Col. Deeds; (k) letter to the Secretary of War from Hon. John D. Ryan, dated November 6, 1918.

Mr. FREAR. In the testimony offered on yesterday, Mr. Secretary, after briefly discussing the matter of air-plane production, and what has been done from the time of the war up to the signing of the armistice, in that work, I called attention to those who were in positions of responsibility under Gen. Squire—Col. Deeds, Mr. Potter, etc., who held positions at various times—and the next man to succeed Mr. Potter was Mr. Ryan who was appointed, I believe, May 20, 1918, and took charge of aircraft production, and, I believe, was in control until the end of the year.

Secretary BAKER. Until after the armistice.

Mr. FREAR. Do you know about what time?

Secretary BAKER. I do not know exactly the time, but until a few weeks after the armistice.

Mr. FREAR. Before the beginning of December?

Secretary BAKER. I should say until in December.

Mr. FREAR. Without taking up the time necessary to read it into the record, I will ask to introduce just a brief extract, taken from

The Manual of Statistics, Stock Exchange Handbook, 1918, showing the interests with which Mr. Ryan is connected:

John D. Ryan, 42 Broadway, is a director in the following concerns:
 American International Corporation, director.
 American Surety Co. of New York, trustee.
 Anaconda Copper Mining Co., president and director.
 Chicago, Milwaukee and St. Paul R. R. Co., director.
 Cuba Cane Sugar Corporation, director.
 Emigrants Industrial Savings Bank- trustee.
 Greene Cananea Copper Co., vice president and director.
 Inspiration Consolidated Copper Co., director.
 Mechanics & Metals National bank of the city of New York, director.
 Montana Power Co., president and director.
 United Metals Selling Co., president and director.

From the first annual report of the Council of National Defense, page 108, we find the cooperative committee on copper, giving the names of men interested in the copper industry, and, among others:

J. D. Ryan, president Anaconda Copper Co., 42 Broadway, New York City, chairman.

And then we have the Anaconda Copper Co., the Montana Power Co., the Chicago, Milwaukee & St. Paul Ry. Co., the Guaranty Trust Co., and mention is made of the United Metals Selling Co., in connection with the Anaconda Copper Co.:

ANACONDA COPPER MINING CO.

A corporation founded under the laws of Montana, June 18, 1895. The company owns the Anaconda Copper Mine at Butte, Mont., together with other mines and claims and a large reduction and smelting works at Anaconda, Mont. It has an interest in the Butte, Anaconda & Pacific Ry. Co., 69 miles.

In 1899 a controlling interest in the stock of this company was purchased by the Amalgamated Copper Co. On May 6, 1915, the Amalgamated Copper Co. announced a plan whereby it was to dissolve and distribute its holdings of Anaconda stock to its stockholders.

In February, 1915, purchased from the Amalgamated Copper Co. the entire stock of the United Metals Selling Co.

On May 19, 1915, the company's stockholders voted to increase the par value of the stock from \$25 to \$50 per share, the number of shares authorized to be reduced from 6,000,000 to 3,000,000, leaving the authorized capital \$150,000,000 as before.

The initial dividend upon the company's new stock (par \$50 per share) was \$1 per share, paid November 20, 1915. On February 28 and May 29, 1916, paid \$1.50 per share. On August 28 and November 27, 1916, and February 26 and May 28, 1917, paid \$2 a share. On July 16, 1917, paid 50 cents. On August 27 and November 26, 1917, paid \$2 per share. On February 25, 1918, paid \$2 per share.

Earnings.

	Gross	Profit.	Charges and depreciation.	Dividends.	Balance.
1914.....	\$54,377,151	\$9,198,410	\$408,831	\$9,077,500	¹ \$287,912
1915.....	87,273,886	19,580,617	2,894,811	9,325,000	¹ 7,370,806
1916.....	150,640,688	51,779,517	8,064,607	17,484,375	¹ 33,343,997

¹ Deficit.

¹ Surplus.

President, John D. Ryan, New York; vice president, Benjamin B. Thayer, New York; vice president, C. F. Kelley, Butte, Mont; secretary and treasurer, A. H. Melin, New York; assistant secretary, R. D. Cole, Butte; assistant treasurer, D. B. Hennessy, New York.

THE MONTANA POWER CO.

A corporation formed under the laws of New Jersey, December 12, 1912. The company was organized to combine the Butte Electric & Power Co., with various subsidiary companies, including the Missouri River Electric & Power Co., the Madison River Power Co., and the Billings & Eastern Montana Power Co. The company has also acquired the stock of the Great Falls Power Co. and Montana Reservoir & Irrigation Co.

In 1913 the company made a contract for supplying the electric power for the operation of 437 miles of the Chicago, Milwaukee & St. Paul Railway, the installation being completed in the early part of 1917.

Stock, par \$100, authorized common \$75,000,000, preferred \$25,000,000; issued, common \$49,407,500, preferred \$9,671,800; total issued \$59,079,300.

Earnings.

	Gross.	Net.	Charges.	Surplus.
1914.....	\$3,778,285	\$2,639,239	\$1,063,614	\$1,575,625
1915.....	4,359,408	3,167,504	1,196,162	1,978,342
1916.....	6,244,905	4,753,282	1,319,735	3,430,547
1917.....	6,912,364	4,889,032	1,395,605	3,493,427

Depreciation reserve during 1915, \$300,000; 1916, \$350,000; 1917, \$350,000.

President, John D. Ryan, New York; vice president, Frank M. Kerr, Butte; vice president, Frederick Strauss, New York; vice president, Alfred Jaretzki, New York; secretary and treasurer, Walter Dutton, New York; assistant secretary and treasurer, Ernest Shaw, New York; assistant secretary, Stephen P. Hogan, Butte; assistant treasurer, James F. Denison, Butte.

Directors: Frederic W. Allen, New York; W. S. Brayton, Montclair, N. J.; George F. Cansfield, New York; Charles Martin Clark, New York; Charles A. Coffin, New York; William E. Corey, New York; Marcus Daly, New York; N. Penrose Hallowell, Boston; Frank M. Kerr, Butte, Mont.; Alfred Jaretzki, New York; Sidney Z. Mitchell, New York; John D. Ryan, New York; Charles H. Sabin, New York; J. G. Schmidlapp, Cincinnati; Henry Seligman, New York; Frederick Strauss, New York; W. D. Thornton, Butte; Albert H. Wiggin, New York; W. K. Whigham, London; H. P. Whitney, New York.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.

A corporation organized under the laws of Wisconsin in 1863 as the Milwaukee & St. Paul Ry. Co., the present title being adopted February 11, 1874.

Road owned June 30, 1916, 9,747.03 miles; owned jointly, 109.74 miles; used under contracts, 351.17 miles; total operated, 10,207.94 miles.

Stock, par \$100; authorized common, \$233,725,100; preferred, \$116,274,900; issued common, \$117,411,300; preferred, \$116,274,900; total issued, \$233,686,200.

Directors: J. Ogden Armour, Chicago; Walter P. Bliss, New York; H. E. Byram, Albert J. Earling, Stanley Field, Chicago; Donald G. Geddes, New York; Edward S. Harkness, New York; Samuel McRoberts, New York; Louis J. Petit, Milwaukee; Percy A. Rockefeller, New York; William Rockefeller, New York; John D. Ryan, New York; John A. Stewart, New York.

John D. Ryan, member executive committee (1918), five members.

Chicago, Milwaukee & St. Paul Railway map is found on page 652 of Poor's Manual of Railways, 1917.

The Seattle, Port Angeles & Western Railway, page 656, containing 66 miles, runs from Discovery Junction westerly through Port Angeles to Majestic, a distance of 62.4 miles, of which 38.4 miles extends from Discovery Junction to Port Angeles; from Port Angeles to Majestic, 24 miles is in operation and an extension of 6 miles from Majestic to Twin River is under construction for logging operations.

The 1919 Time-Table No. 124, gives this branch running from Port Townsend to Twin Rivers, 78.5 miles. The stock is owned by the Milwaukee Railway.

Poor's Manual, page 670, in 1917, states the Guaranty Trust Co. of New York is trustee for the Chicago, Milwaukee & St. Paul Railway. This gives same directors, as the railway built by the Government from the newspaper advertisements of sale apparently extends west from Port Angeles about 60 miles.

GUARANTY TRUST CO.

(P. 628, Bankers' Directory, 1918.)

Location, 140 Broadway, New York City; president, C. H. Sabin; chairman of board, A. J. Hemphill; paid up capital, \$25,000,000; surplus, \$26,173,000; deposits, \$508,930,000.

Directors: T. F. Ryan, E. J. Berwind, G. W. McGarrah, W. A. Harriman, R. W. Goelet, D. C. Reid, A. D. Juilliard, G. B. Duke, A. H. Wiggin, T. DeWitt Cuyler, J. S. Runnells, J. A. Spoor, J. R. Morron, A. H. Harris, G. M. P. Murphy, H. P. Whitney, W. C. Potter, W. C. Lane, C. H. Allen, V. P. Snyder, T. W. Lamont, C. A. Peabody, G. J. Gould, E. L. Marston, J. D. Ryan, D. Guggenheim, C. H. Sabin, A. J. Hemphill, C. C. Dula, Albert Strauss.

(Taken from Bankers' Directors, 1916, p. 1839.)

Mr. FREAR. Mr. Ryan and Mr. Potter are among the directors.

UNITED METALS SELLING CO.

This company was a New Jersey corporation, organized under the Amalgamated Copper Co., by which it was absorbed in April, 1911.

The present company has been incorporated in Delaware with \$5,000,000 capital stock, all owned by the Anaconda Copper Mining Co.

The purchase price of the assets, business, and good will of the United Metals Selling Co. in March, 1915, was \$6,624,583.

The only officers named are those of the Anaconda Copper Mining Co., of which John D. Ryan is president.

Directory of Directors gives John D. Ryan president of United Metals Selling Co.

Mr. FREAR. Mr. Ryan for some years has been the president, as you understand, of the Anaconda Copper Co.?

Secretary BAKER. He has been interested in it, but whether president of it for some years I do not know.

Mr. FREAR. That is what is shown by the Manual of Statistics, along with other companies, and I take it to be so.

The Anaconda Copper Co. controls all of the stock of the United Metals Selling Co.?

Secretary BAKER. I do not know about that.

Mr. FREAR. That will be shown in the memorandum which I have asked to be inserted, and with that it is shown that Mr. Ryan is the President of the United Metals Selling Co.

Secretary BAKER. I know nothing on that subject.

Mr. FREAR. That statement will be added to the others.

Under the head of Anaconda Copper Co., page 62, The Manual of Statistics, 1918, is to be found:

In February, 1915, purchased from the Amalgamated Copper Co. the entire stock of the United Metals Selling Co.

When the Government was engaged in purchasing copper for war purposes it purchased from the various producers and allocated all of its purchases through this United Metals Selling Co., 42 Broadway, New York; or do you know that to be a fact?

Secretary BAKER. I know of the general arrangement that was made by which there was a committee that allocated the supply of copper, and that the price was fixed by the Government, but the allocations were made through a committee which represented some kind of cooperative arrangement among the producers.

Mr. FREAR. In this connection I will read, briefly, so as to have it as a matter of record, from a letter from the War Industries Board, Washington, D. C., signed by Pope Yeatman, nonferrous metals

section, addressed to Hon. W. G. Edmonds, House of Representatives, one paragraph of which is in relation to this matter.

Mr. LEA. What is the date of that letter?

Mr. FREAR. August 31, 1918.

Mr. LEA. Why not let the whole letter go in?

Mr. FREAR. All right. I only feared it would encumber the record. (The letter referred to is printed in full, as follows:)

WAR INDUSTRIES BOARD,
Washington, August 31, 1918.

Hon. G. W. EDMONDS,
Committee on Claims, House of Representatives,
Washington, D. C.

DEAR SIR: Your letter of August 23 to the secretary of the War Industries Board has been referred to this section, which handles copper.

The War Industries Board does not purchase copper, but when requested, advises the various Government purchasing departments, who place their orders through the copper producers committee, 60 Broadway, New York; Mr. Hamilton Brush, secretary. Purchases for domestic consumption are allocated by this committee to the various producers through the agency of the United Metals Selling Co., 42 Broadway, New York, and for export to our Allies, through the agency of the American Smelting & Refining Co., 120 Broadway, New York.

Copper is now sold at the maximum price of 26 cents per pound, in accordance with the proclamation recently approved by the President, copy of which we inclose you herewith. On September 20, 1917, the President approved the price agreed between the War Industries Board and the producers of 23½ cents per pound f. o. b. New York, subject to revision after four months. On January 22, 1918, the President approved an extension of this price to June 1, 1918. On May 27 this price was again continued, failing any revision, until August 15, but on July 2 the President approved a revision of the price to 26 cents per pound, taking effect on that date and effective until August 15, f. o. b. cars or lighters at refinery if shipped from eastern refineries and f. o. b. New York if shipped from western refineries. For certain unusual shapes premiums have been allowed by the price-fixing committee, as per inclosed copy.

The principal uses of copper as refined copper in the military program are for bands for shells, tubing, electrical apparatus, wire for the Signal Corps, rods, etc., in alloys of brass, bronze, monel metal (67 per cent copper), admiralty metal (65 per cent) copper, etc., for shell cases, cartridge cases, turbine blades, propeller blades, brass parts for engines, trucks, ship accessories, etc. The railroads also require a large amount of copper.

During the first half of 1918 the quantities of copper sold and delivered by the producers have been as follows, in tons of 2,000 pounds each:

	Tons.	Tons.
Domestic commercial.....	222, 616	
United States Government.....	150, 594	
		373, 210
Foreign commercial.....	36, 028	
French Government.....	119, 099	
British Government.....	70, 187	
Italian Government.....	31, 255	
Belgian Government.....	1, 120	
		257, 689
Total.....		630, 899

It should be noted that the shipments to foreign private consumers were practically all for war purposes, and to domestic consumers a very large percentage was for indirect war purposes.

We inclose you a copy of the 1917 report on copper by the United States Geological Survey, and an abstract from the August bulletin of our Division of Statistics.

We trust that this information is what you require, but if you wish any further information we shall be glad to have you call upon us.

Yours, very truly,

POPE YEATMAN,
Nonferrous Metals Section.

Mr. FREAR. Purchases were made by the Government from these various producers of copper at prices fixed by the Government after the war was entered into?

Secretary BAKER. Yes.

Mr. FREAR. I have one of these orders attached to the letter, under date of August 10, 1918, which, presumably, was just prior to the letter that was written to Congressman Edmonds; and in this statement is shown the price of copper as approved by the President, August 10, 1918, from which I will quote—

Mr. LEA (interposing). Why not just put in the whole statement?

Mr. FREAR. Very well; I am perfectly willing that the whole statement should go in, and I only had the idea that it would help in reading the record just to have that part which is relevant.

The entire statement is as follows:

STATEMENT OF THE PRICE OF COPPER APPROVED BY THE PRESIDENT AUGUST 10, 1918.

The President has approved an agreement, made between the producers of copper and the price-fixing committee of the War Industries Board (after investigation by this committee in conjunction with the Federal Trade Commission as to cost of production), that the maximum price of copper shall be 26 cents per pound, taking effect August 15, 1918, for shipment after said date, but subject to revision after November 1, 1918, f. o. b. cars or lighters at eastern refineries, f. o. b. cars or lighters at Pacific coast refineries for Pacific coast destinations, and f. o. b. cars or lighters New York if shipped to eastern or interior destinations from Pacific coast refineries and from refineries in the interior of the United States. All shipments made after November 1, 1918, are subject to any change in price made by the price-fixing committee to take effect after that date. The maximum price is subject to the additional charges on copper shapes approved by the price-fixing committee on June 5, 1918.

The conditions are: First, that the producers of copper will not reduce the wages now being paid; second, that they will sell to the United States Government, to the public of the United States, and to the allied Governments at not above the maximum price; third, that they will take the necessary measures, under the direction of the War Industries Board, in the distribution of copper to prevent it from falling into the hands of speculators, who might increase the price to the public; and fourth, that they will pledge themselves to exert every effort necessary to keep up the production of copper so as to insure an adequate supply so long as the war lasts.

Mr. FREAR. The purchases of copper that were allocated by the United Metals Selling Co. included practically all of the copper that was used by the Government, I take it?

Secretary BAKER. Oh, very much more than that.

Mr. FREAR. That is, you mean that they handled very much more than was used by the Government, or what?

Secretary BAKER. The Government allocated to them very much more, or ordered from them very much more than the Government needed.

Mr. FREAR. For foreign governments?

Secretary BAKER. Yes. The purpose of that organization, in order to have the record clear, was to prevent competition between foreign governments and ourselves, as well as among foreign governments, and therefore running up the price. Therefore an arrangement was made by which the War Industries Board made purchases for foreign governments, and allocated orders, so as to prevent a shortage for foreign governments and ourselves alike, and to keep the price uniform.

Mr. FREAR. That was the general understanding, I suppose.

Secretary BAKER. Yes, sir.

Mr. FREAR. The effect of that was to fix the price for copper produced by these men, Mr. Potter, Mr. Ryan, and all the various companies in the country, and that price was determined by the Government through the action, either of Mr. Baruch or the President—and I assume by the President—after it was undertaken, but prior to that time it was sold in the open market, of course.

Secretary BAKER. Undoubtedly. I would not say that it was fixed by Mr. Baruch. Of course, while Mr. Baruch was the chairman of the War Industries Board, I do not know just what his particular relation to copper fixing was; that was done by a committee on copper, nonferrous metals—and investigations were made by the Federal Trade Commission as well.

Mr. FREAR. That was done before the—

Secretary BAKER (finishing the question). Formal organization of the War Industries Board?

Mr. FREAR. Yes.

Secretary BAKER. After that the fixing of the price went by the order of the President. I think all the time it went by the order of the President, either directly or indirectly.

Mr. FREAR. When Mr. Baruch fixed it it was by order of the President.

Secretary BAKER. If Mr. Baruch fixed it at all it was done by order of the President.

Mr. FREAR. The general understanding by the press is that it was fixed by Mr. Baruch.

Secretary BAKER. Mr. Baruch is here and can answer for himself. I do not remember who the members of the nonferrous metals committee was in the Army; there was an organization which undertook to do that.

Mr. FREAR. Copper was bought at that time by the Government running all the way from 16 cents to 26 cents a pound, as I understand, and those prices were paid to the various producers under the United Metals Selling Co. arrangement.

Recently a contract was entered into on the 10th day of April, 1919, between the United States, through Mr. Hare, director of sales, of the first part, and the United Metals Selling Co., of the other part, for the sale of 100,000,000 pounds of copper by the Government back to the same company at the prices to be determined. I will read this, from the contract itself, which contract appears in the hearings held by subcommittee No. 5 (Ordinance), serial 6, part 2:

The contract price for copper in usual commercial shapes, is hereby fixed at the monthly average New York price for electrolytic copper, as quoted by the Engineering and Mining Journal (published in New York).

That was for the delivery by the Government of 100,000,000 pounds of copper, running over a period of 15 months, I believe, with the privilege on the part of the United Metals Selling Co. of taking it over at an earlier time, if desired, except that for certain months the purchaser should take not less than 5,000,000 pounds and for other months not less than 10,000,000 pounds.

You are familiar with that contract?

Secretary BAKER. Perfectly familiar with it.

Mr. FREAR. I am asking if you know, Mr. Secretary, that the copper purchased at prices ranging from 16 cents to 26 cents a pound,

was resold by the Government at from 15.8 cents a pound to 17.6 cents a pound, as shown in testimony presented before subcommittee No. 5 (Ordinance) of the Select Committee on Expenditures in the War Department; and that the less than 15,000,000 pounds still on hand is expected to net around 23 cents, the present price, according to that testimony.

Secretary BAKER. I do not know that, but it does not surprise me.

Mr. FREAR. I am not familiar with the fact and am quoting, in part, from a newspaper statement which asserts that to be a fact. I was asking if you know.

Secretary BAKER. I will be very glad to describe that arrangement, and about the reason for it.

Mr. FREAR. We will be glad to have you do it.

Secretary BAKER. The situation was this: That when the armistice came the War Department had on hand a very large quantity of copper. It was in all the forms in which copper is gotten, native copper, electrolytic copper, and in the various bar forms. The copper-mining industry in the United States was in a very serious situation. There was no foreign market for copper, absolutely none. The output of the American mines has been the chief reliance of the world for copper for a long time, and exports of copper from the United States have taken up the major part of our production of copper. There was no foreign market; undoubtedly foreign markets wanted it, but the disturbed state of the world, finance and otherwise, made it impossible for anybody abroad to buy copper, and there were no orders given in this country for a long time for copper. The copper producers in this country, of course, during the war, had been producing the maximum capacity, and had an advantageous arrangement with their laborers, I mean advantageous to their labor, based upon sliding scales of payment. That was by which a bonus of a certain amount was paid to the men, and their scale of pay depended upon the quantity of output.

The situation therefore was that the United States had this very large stock of copper. The mining companies, from the armistice forward, had continued their operations so as not to turn their labor out of the mines. They had very large accumulations of copper—as I recollect, hundreds of millions of dollars worth of copper, with no market for it. The effort on everybody's part was to continue production of copper, and for two reasons: In the first place, it was known that the world's supply of copper was short, and that ultimately there would be a demand for this copper, so that the world's needs might be supplied. A very great deal of copper had been destroyed in munitions; but the paramount and controlling reason for production of copper was to keep the copper men's labor employed, as far as possible, not to bring about such diminution in their wages, under the sliding scale arrangement, as would cause unrest in the copper mines.

I was waited upon by two different sets of interests with regard to it. A very strong delegation of copper miners came to Washington and had conference after conference with the Secretary of Labor, in which they laid out—and I know only in general terms their general representation of the situation—that the copper miners of the country were in great unrest, with agitation among them, which had been very great to start with. There had been labor troubles in practically all

of the copper mines, from time to time, in the copper-mining regions, and the menace of unemployment in those regions at that time was regarded as an exceedingly serious matter.

The Secretary of Labor brought those representations first to my attention, and I saw one of those delegations and listened with very great interest and some concern to what they represented.

The other set of delegates that I saw on the subject were the copper producers, who explained to me that they had no market for this enormous accumulation of copper, and if the Government supply of copper were simply dumped on the market for what it would bring, the Government would get a very small price, and it would have the effect of closing their mines, so that their labor would all be thrown out of employment and their own surplus of copper would be seriously affected in the price to which it would go if the Government threw upon the market this large accumulation.

I therefore worked out an arrangement of having the Government supply of copper sold in conjunction with the rest of the copper of the country; that is, have the Government copper fed into the general demand. I was not willing to have the demand for copper, as it should revive, absorbed entirely by the copper producers and have the Government to hold this great bulk of copper indefinitely; nor was I willing to dump this Government copper upon the market and reduce the price, so that we would not get practically anything for it, in addition to having this disturbing effect.

So I directed the Director of Sales to make an arrangement with the copper distributing agencies whereby they would act as selling agents for the Government and sell the Government copper along with their own as the demand began to revive and as our own industry in this country began to get back on a peace-time basis, and to take up the manufacture of things in which copper would be used. Also, as the foreign demand came on, some of our Government copper would be sold as well as some of the accumulation of the copper producers would be sold, and thereby two streams of surface supply would go out together, and it would protect the labor situation in the mines.

Mr. FREAR. Apart from the labor situation this arrangement enabled the United Metals Selling Co., which had sold or allocated this copper to the different branches of the Government and other governments at, eventually, a price of 26 cents a pound, and prior to the war at very large amounts, to then buy it back at whatever figure the copper would be quoted at in the various months mentioned in the contract. The result of that was—and I am asking this as a question—the result of that was, was it not, to give to the copper producing companies' representative, the United Metals Selling Co., which again purchased back this copper under that arrangement, a profit of all the way from \$5,000,000 to \$10,000,000 on this particular amount of copper that was handled?

Secretary BAKER. I think not, Mr. Frear. I do not understand that to have been the fact.

Mr. FREAR. Let us see if I am mistaken in that. The 100,000,000 pounds of copper mentioned in this contract had been purchased from the copper men and allocated at a price fixed by the Government, which ran up to 26 cents a pound, as you recall?

Secretary BAKER. Yes, sir.

Mr. FREAR. When it was sold back to the copper producers, through this same United Metals Selling Co., it was sold at the price fixed that month on the market, which was a low price, running around 15 and 16 cents a pound?

Secretary BAKER. Yes, sir.

Mr. FREAR. And they took practically all of the copper back at that time at the bottom figure instead of waiting for the 15 months, as provided in the contract, except the 15,000,000 pounds stated in that communication?

Secretary BAKER. Your point is, that by taking advantage of the option in the contract to buy in quantity early in the period rather than late in the period—

Mr. FREAR (interposing). Yes; and when the price had been depressed to 15 cents or 16 cents, in April and May, they took it back at that time, notwithstanding they had sold the copper to the Government at a price running up to 26 cents, by the President's order?

Secretary BAKER. They sold it for us. They did not buy it from us; they sold it for us. We would have gotten more money for it on the theory of these market quotations, which you have just mentioned, if they had not sold it so fast for us, if that is the point you make; but they made no money out of it, except that they sold it to us for a higher price than we were able to sell it for.

Mr. FREAR. This 100,000,000 pounds of copper was sold through the United Metals Selling Co. to whom?

Secretary BAKER. Sold to purchasers, users of copper.

Mr. FREAR. Well, the purchasers were largely producers, were they not?

Secretary BAKER. Oh, no; I understand not. They were sold on order. For instance, some copper-fabricating company or some copper-using company, or some copper-wire company, or something of that sort, would write in to the copper companies and say: We want 10,000,000 pounds of copper. They would get 8,000,000 pounds of their copper and 2,000,000 pounds of ours.

Mr. FREAR. Did you deal to the purchasers direct?

Secretary BAKER. No, sir.

Mr. FREAR. You were dealing with the United Metals Selling Co., and they could sell to anyone at any time they chose?

Secretary BAKER. Yes, sir.

Mr. FREAR. At the market price?

Secretary BAKER. Yes, sir.

Mr. FREAR. The United Metals Selling Co., in this case, through Mr. Ryan, its president, if it desired to buy this copper on a low market, could do it? And I am inquiring of you did they do that, or do you know?

Secretary BAKER. I do not know the facts about that.

Mr. FREAR. After those sales occurred at 15 or 16 cents, all except 15,000,000 pounds of copper, then the market rapidly rose until it was up in the neighborhood of 18 or 20 cents, as I understand it is now?

Secretary BAKER. Undoubtedly, if we had had prescience enough to have foreseen a rapidly rising market we would have made something, but at the time we made that arrangement the copper market was at the bottom.

Mr. FREAR. And that contract left the United Metals Selling Co. in a position absolutely to control the market, and to depress the market, and to raise the market afterwards. That company represents the copper producers of the country, does it not?

Secretary BAKER. Well, I can not say just how much control they had in the matter. The price of copper is regulated by demand. Whether there was any sort of conspiracy among the copper people to depress the market until they sold the Government copper and then raise it to sell their own, I do not know anything about that.

Mr. FREAR. Would it be surprising to find that here were 100,000,000 pounds of copper dumped upon the market, in addition to the regular production, that was kept up in the mines, and yet copper is rapidly reaching back to the price at which it was sold when we bought it originally? The price of copper is now in the neighborhood of 20 cents a pound?

Secretary BAKER. Mr. FREAR, I do not know enough about the situation to answer that question. I do not know whether that is remarkable or not.

Mr. FREAR. We know this, Mr. Secretary, from past experience, that those who control the supply and who deal in commodities of that kind on the markets are engaged in manipulating the market constantly, are they not?

Secretary BAKER. That is the current belief. How much is founded upon fact I do not know.

Mr. FREAR. Here is a case where the producers sold the Government at the price of 26 cents a pound through the United Metals Selling Co., and now they take it back—whether as the agents of the Government or in what capacity they are acting, they are the ones with whom the Government deals alone, and when they purchase they purchase at 15 and 16 cents a pound, as to the great bulk of this copper?

Secretary BAKER. They sold it for us at that price. I do not think they bought it at that price.

Mr. FREAR. They would not buy it back as the United Metals Selling Co., but perhaps they bought it back for the Guggenheim interests or the Anaconda Co. Instead of drawing it from their own accumulations wouldn't it be a natural thing to buy it from the United Metals Selling Co., when they could get it at that price, and dispose of it in that way?

Secretary BAKER. That is possible.

Mr. FREAR. In fact, it is provided in this agreement that this copper can be collected from various points now held by the Government including Raritan Arsenal?

Secretary BAKER. Yes, sir.

Mr. FREAR. And the United Metals Selling Co. also in addition charged a commission against the Government for handling the copper at the time?

Secretary BAKER. That may be so.

Mr. FREAR. That appears in the contract, which speaks for itself, and that contract was approved by yourself?

Secretary BAKER. It was made pursuant to an arrangement which I approved. I did not see the contract in written form, but I approved the arrangement.

Mr. FREAR. The contract appears on pages 54, 55, 56, and 57 of the hearings held by Subcommittee No. 5 (Ordinance) of the Select Committee on Expenditures in the War Department, serial 6, part 2, and I now here offer it in evidence.

(The contract is as follows:)

[Exhibit No. 9.]

Director of Sales Contract No. 111. United States of America and United Metals Selling Co. Purchase, Storage and Traffic Division, United States Army. Dated Apr. 10, 1919.]

CONTRACT FOR SALE OF COPPER.

This contract made this 10th day of April, 1919, by and between the United States of America, by C. W. Hare, Director of Sales (hereinafter called the contracting officer), acting under direction of the Director of Purchase, Storage and Traffic and under authority of the Secretary of War, pursuant to the provisions of an act of Congress approved July 9, 1918 (Public, 193, 65th Cong., p. 6), of the first part, and the United Metals Selling Co., a corporation organized and existing under and by virtue of the laws of the State of Delaware, acting for and on behalf of various copper producers, and having its principal office at 42 Broadway, New York, N. Y. (hereinafter called the purchaser), of the second part, witnesseth:

Whereas certain copper hereinafter described has been procured and acquired by the United States since April 6, 1917; and

Whereas the United States deems it expedient to dispose of the same to the best advantage:

Now, therefore, the parties hereto in consideration of the mutual agreements herein contained have agreed and do hereby agree as follows:

ARTICLE 1. *Material to be sold.*—The United States shall sell and deliver to the purchaser not more than 100,000,000 pounds of electrolytically refined copper or at its option prime Lake copper, 99.9 per cent pure and not more than 5,000,000 pounds of copper scrap and the purchaser shall receive and pay for the same upon the following terms and conditions:

ART. 2. *Shapes and grades.*—A. The copper is to be in the usual commercial shapes of ingots, ingot bars, wire bars, cakes, or slabs.

B. Copper in other than the usual commercial shapes (determined by agreement between an experienced and duly authorized representative of the contracting officer and an experienced and duly authorized representative of the purchaser, and, in the event of their failure to agree, by a third person selected by those two, whose decision shall be final and binding on both parties) shall be delivered to the nearest available refinery at the cost of the United States.

C. Copper scrap, which term shall include what is usually known as scrap provided the copper is not alloyed with any other metal, shall be delivered at the cost of the United States to the nearest available refinery equipped for handling such material.

The copper content of such scrap copper shall be determined at the refinery by electrolytic assay.

Should any dispute arise as to the assay, a sample of the scrap copper shall be submitted for analysis to Lucius Pitkin (Inc.), 47 Fulton Street, New York City, or Ledoux & Co., 99 John Street, New York City, for determination of analysis. The fee and expense involved in such analysis shall be paid by the party in error.

The purchaser shall furnish to the contracting officer certified assay and sworn weight certificates.

ART. 3. *Inventory.*—The quantity and location of the copper and copper scrap shall be in accordance with an inventory attached to and made a part of this contract and marked "Schedule A." At any time within three months from the date of this contract the contracting officer may furnish to the purchaser additional inventories for copper and for copper scrap, provided the purchaser may refuse to purchase any copper or copper scrap included under said additional inventories and in such event shall give a written notice thereof to the contracting officer within 10 days of the receipt of any additional inventory.

Subject to all terms and conditions of this contract the quantities included in additional acceptable inventories shall be delivered and paid for in approximately equal quantities each month during the unexpired term of this contract.

The copper and copper scrap specified in said inventories shall be the copper and copper scrap sold and purchased hereunder.

ART. 4. *Shipping.*—The cost of loading the copper or copper scrap on cars or lighters will be paid by the United States except loading charges at the plants or refineries

of the purchaser. From time to time upon receipt of shipping instructions the United States will promptly load the copper or copper scrap specified in said shipping instructions on cars or lighters furnished by it.

Title to the copper in usual commercial shapes shall pass on loading at the locations designated in Schedule A as evidenced by bill of lading or other document showing shipment, except as hereinafter provided, and no further responsibility shall attach to the United States in respect thereto.

If in the judgment of the purchaser it should be necessary to transfer not more than 50 per cent of the copper herein contracted for from such location as may be designated by the contracting officer to the Raritan Arsenal or to such other United States depot as may be agreed upon by the parties to this contract, such transfer at the cost of the United States will be made with reasonable dispatch. In such event title to the copper so transferred will pass upon loading at said arsenal or such other United States depot as evidences by bill of lading or other document showing shipment and no further responsibility shall attach to the United States in respect thereto.

Title to copper in other than usual commercial shapes and to scrap copper shall pass on delivery at the plants or refineries of the purchaser, and no further responsibility shall attach to the United States in respect thereto.

The purchaser shall pay the cost of transporting said copper in other than usual commercial shapes and said scrap copper from the locations designated in Schedule A or in additional acceptable inventories to the nearest available refinery equipped for the handling of such material. Transportation charges so paid shall be deducted from the amounts due from the purchaser to the United States. Adjustment of transportation charges will be made on monthly settlement days, it being the intention of this contract that the United States shall reimburse the purchaser for all transportation charges paid by it in accordance with the provisions of this article. The purchaser shall furnish to the contracting officer sworn statements of freight charges paid, together with copies of receipted freight bills.

ART. 4. *Delivery*.—The copper delivered by the United States and taken by the purchaser shall be not less than the quantities indicated in the following schedule of deliveries:

During the month of—	Pounds.	During the month of—	Pounds.
April, 1919.....	5,000,000	December, 1919.....	5,000,000
May, 1919.....	5,000,000	January, 1920.....	5,000,000
June, 1919.....	5,000,000	February, 1920.....	10,000,000
July, 1919.....	5,000,000	March, 1920.....	10,000,000
August, 1919.....	5,000,000	April, 1920.....	10,000,000
September, 1919.....	5,000,000	May, 1920.....	10,000,000
October, 1919.....	5,000,000	June, 1920.....	10,000,000
November, 1919.....	5,000,000		

Should the total sales of copper owned or controlled by the purchaser and all producers of copper represented by it in any one month during the months of April, 1919, to January, 1920, both inclusive, exceed 50,000,000 pounds, and during the months of February, 1920, to June, 1920, both inclusive, exceed 100,000,000 pounds, in such event the quantities specified in the above schedule shall be increased by an amount equal to 20 per cent of such excess. It is further agreed that by mutual agreement between the contracting officer and the purchaser that the quantities specified in this article may be further increased in any one month.

Deliveries of such excess quantity shall be made during the succeeding month, the copper to be paid for at the contract price during the month within which such additional copper was sold. It is understood that such increase shall not relieve the purchaser from its obligation to take the schedule requirements for any subsequent month until all the copper and copper scrap herein contracted for has been taken.

The purchaser shall furnish to the contracting officer on the 5th day of each succeeding month during the currency of this contract a sworn statement of the total sales of the preceding month as reported by the producers represented by it.

It is expressly understood and agreed that the entire quantity of copper and copper scrap herein contracted for shall be taken and removed by the purchaser on or before June 30, 1920.

ART. 6. *Weighing*.—The copper herein contracted for shall be weighed at the cost of the United States at the locations designated in Schedule A or at the locations designated in additional acceptable inventories or at the Raritan Arsenal or other acceptable United States depot by experienced and duly qualified weighers. The purchaser may at its expense maintain an inspector at the point at which each shipment is weighed. Such inspector shall have authority to properly inspect scales and weights. Any disputes as to weights shall be determined by agreement between an

experienced and duly authorized representative of the contracting officer and an experienced and duly authorized representative of the purchaser, and, in the event of their failure to agree, by a third person selected by these two, whose decision shall be final and binding on both parties.

ART. 7. *Contract price.*—(1) The contract price for copper in usual commercial shapes is hereby fixed at the monthly average New York price for electrolytic copper as quoted by the Engineering and Mining Journal (published in New York).

(2) The contract price for copper in other than the usual commercial shapes is hereby fixed at the monthly average New York price for electrolytic copper as quoted by the Engineering and Mining Journal (published in New York), less one-half cent per pound.

(3) The contract price for the copper content of the scrap copper is hereby fixed at the monthly average New York price for electrolytic copper as quoted by the Engineering and Mining Journal (published in New York), less 1½ cents per pound.

In the event that no average monthly price shall be fixed by said journal for any month during the currency of this contract the contract price for such month shall be fixed by agreement between a duly authorized representative of the contracting officer and a duly authorized representative of the purchaser, and, in the event of their failure to agree, by a third person selected by these two, whose decision shall be final and binding on both parties.

The contract price for the various shapes and grades of the copper shall be determined on the 5th day of May and on the 5th day of each succeeding month during the currency of this contract.

The contract price determined as above shall apply to all copper and copper scrap which the purchaser has agreed to receive and pay for during the preceding month.

The United States shall allow the purchaser a deduction of 1 per cent of the contract price upon all copper and copper scrap delivered and taken hereunder to cover all necessary expenses in connection with the sale of said material, including storage, unloading, freight charges to the plants of the purchaser's vendees, weighing and assaying charges, and all other incidental expenses, including superintendence but excluding deductions referred to in subparagraphs 2 and 3 of this article 7.

The contract price shall be paid by the purchaser to the United States in gold or its equivalent at Washington, D. C., or other points indicated by the United States on or before the 15th day of the second month for each month's quota as heretofore specified.

ART. 8. *General provisions.*—The purchaser shall from time to time and whenever so requested, furnish to the contracting officer statements and reports on the progress of the performance of this contract and full information of all factors relating to performance hereunder. The purchaser agrees at all times to do all things necessary to protect and conserve the best interests of the United States.

ART. 9. *Causes beyond control of the purchaser and the United States.*—Neither party shall be held responsible for or be deemed to be in default hereunder by reason of delays in performance of this contract due to strikes, transportation embargoes, fires, explosion, riots, acts of God or other causes beyond their control.

ART. 10. *Use of copper by United States.*—Upon notice in writing from the contracting officer to the purchaser the United States may for its own purposes, but not for resale, use any of the copper herein contracted for prior to the resale thereof by the purchaser.

ART. 11. *Officials not to benefit.*—No Member of or Delegate to Congress or Resident Commissioner is or shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this article shall not apply to this contract so far as it may be within the operation or exceptions of section 116 of the act of Congress approved March 4, 1909 (35 Stats., 1109).

ART. 12. *Contract not transferable.*—Neither this contract, nor any interest herein, shall be transferred by the purchaser to any other party except to the extent permitted by section 3477, United States Revised Statutes.

ART. 13. *Notice.*—Any notice to the purchaser under this contract when not actually delivered in writing to the purchaser shall be deemed to have been sufficiently given when mailed in a sealed postpaid wrapper addressed to the purchaser at 42 Broadway, New York, N. Y. Any notice to the United States under this contract, when not actually delivered in writing to the contracting officer, shall be deemed to have been sufficiently given when mailed in a sealed postpaid wrapper addressed to the Director of Sales, War Department, Washington, D. C.

ART. 14. *Bond.*—The purchaser shall furnish to the United States within 20 days after the execution and delivery of this agreement a bond in the sum of \$1,000,000, conditioned upon the full and faithful performance by the purchaser of all terms,

covenants, and conditions of this contract on the part of the purchaser to be performed. Such bond shall be in the form and with sureties satisfactory to the contracting officer. Unless such bond is furnished within the time limited, this agreement may, at the option of the contracting officer, be canceled.

ART. 15. *Adjustment of claims and disputes.*—Except as otherwise specifically provided in this contract, any claims, doubts, or disputes which may arise under this contract, or as to its performance or nonperformance may be determined upon petition, of either party hereto by the Secretary of War. The decision of the Secretary of War shall be final and conclusive on all matters submitted for determination.

ART. 16. *Definitions.*—Contracting officer: The officer in whose name this contract is executed, his successor or successors, or any one from time to time designated by the Director of Purchase, Storage and Traffic to act as contracting officer, and his or their duly authorized agent or agents who may be specifically delegated to perform the various functions herein attributed to the contracting officer.

The purchaser: The party of the second part, its legal representative and successors. In witness whereof, the parties hereto have caused this contract to be executed and delivered in triplicate by the proper officers thereunto duly authorized the day and year first above written.

UNITED STATES OF AMERICA,
By _____,
Contracting Officer.
UNITED METALS SELLING Co.,
By _____,
Purchaser.

WITNESSES:

Secretary BAKER. I think the committee ought to have Mr. Ryan before it and let him discuss that question.

Mr. FREAR. I think so, when we get to that; and we want to find out to whom that copper was sold.

Secretary BAKER. Undoubtedly; and all conditions as to the market, and everything else.

Mr. FREAR. Now, coming back to Speaker Clark's speech, which was made on the floor of the House at the time the matter originally came up about fixing the price of copper by Mr. Baruch. In the debate the speaker then said:

"I will ask you another question," said the Speaker. "Why does not the Attorney General of the United States hop onto those fellows that put it up to 30 cents? I am willing to give Baruch credit for pulling it down from 30 cents to 16 cents, but he did not pull it down far enough, and the Attorney General could put every one of those fellows into jail between now and Saturday night who kept the price up."

Passing by the recommendation of the Speaker in that respect, no proceeding ever has been brought against the copper people in regard to any monopoly that was exercised at that time or any fixing of the price by them, either to this Government or to other governments?

Secretary BAKER. Not that I know of.

Mr. FREAR. At this time, I understand, the Attorney General is to be urged, according to recent reports by the Federal Trade Commission, in the matter of bringing action against other combinations that exist to-day in regard to foodstuffs, and I want to ask you whether or not it would not be equally fair, if a combination does exist and did exist at that time among the copper people to compel the Government to pay this price—if it wouldn't be fair and right at this time to begin proceedings against them?

Secretary BAKER. Well, that would be a question for the Attorney General to decide under all the circumstances.

Mr. FREAR. Quite naturally, and not on a recommendation of a Member of Congress or anyone else, I assume.

Secretary BAKER. It would be a thing he would have to consider in the light of the facts. But, of course, conditions at the time were entirely different from conditions to-day.

Mr. FREAR. But the same people who sold to us are purchasing back to-day, whether as agents of the Government or not.

Secretary BAKER. I know nothing about their internal arrangements, Mr. Frear.

Mr. FREAR. And it appears in all this record that, as I have stated, Mr. Ryan is president of the Anaconda Co. and is one of the very large producers and a large business man and recognized as such not only in the copper business, but in other interests in which he is active.

Now, reaching the spruce question, which we will only discuss in an incidental way at the present, because that is something that we are to investigate more fully when we take up hearings in the West. The committee is in receipt of a letter, dated July 18, 1919, from Seattle, Wash., directed to the chairman, which I will insert in the record and read at this time so as to indicate the character of a request in which you are concerned:

SEATTLE, WASH., July 18, 1919.

HON. JAMES A. FREAR,

House of Representatives, Washington, D. C.

DEAR SIR: Your telegram in response to our telegram of July 14 is duly received and in reply thereto would say.

Let me say right there, by way of explanation, that a protest was received from an organization in Seattle against the sale of the railways and various properties which the Government advertised for sale out West on September 2. When this telegram was received it was of such a character that I immediately wired that if any definite complaint was to be made to put it specifically in writing and forward it to the committee. In response to that this letter was received, and I have just read the first paragraph of it, and will not follow with the balance:

The United States Spruce Production Corporation, with headquarters at Portland, Oreg., since the signing of the armistice, has assembled at Vancouver, Wash., logging and other machinery which has been or is being disposed of by sale, piecemeal, presumably to the best advantage.

That corporation is now offering for sale—bids to be submitted by September 2, 1919—its railway and mill properties on the Olympic Peninsula, and its railway and timber properties in Lincoln County, Oreg.

Briefly stated, that includes the railway in the State of Washington which was ostensibly built to reach the spruce region on the Olympic Peninsula, and two other railways, from Clallam Junction on Clallam Bay, one road running north and the other running south. These are the railways which appear in the advertisement to be sold at this time by the Spruce Production Corporation, together with these mills; all advertised together for sale on September 2.

It is these last sales that for the best interest of the public should be adjourned or postponed until after your committee has made its complete investigation and report.

The location, development, and particularly the manner of handling these properties, has been accompanied by criticisms, reports, and accusations of the manipulation of expenditures in their acquirement as in the direction of favored interests instead of a prompt production of aeroplane lumber.

If true, in whole or in part and these advertised sales are made, the results of the investigation will be more or less academic, since the title of these properties will have passed from the Government.

Until the whole matter is thoroughly gone into and the identity of those responsible for and benefited by these particular operations determined, it would seem to be

clearly better that the sales should be delayed, as such program can not jeopardize in any way the interests of the Government itself, while another plan might in its results prove to be adverse to sound public policy.

The activities of the Spruce Production Corporation in Clallam County, Wash., were exclusively represented by a cost-plus contract held by the Siema-Carey Co., a corporation not theretofore identified with logging or lumber operations, although such operations were presumed to be essentially spruce production.

The Oregon operations were largely conducted through the Warren Construction Co., a firm also reported formerly not interested in operations of this kind requiring peculiar experience and skill.

Until the occasion of the failure of the established logging and lumber industry itself to have been invited to or intrusted with this important war work is made public, it would seem conservative to maintain the status quo, as your committee it is hoped will be able to bring out the facts and explanation of much that our industry has seemed difficult to appreciate or to understand.

Further, during the war all were impressed with the great and surpassing potential importance of these spruce forests of premier quality, and with the need of the resulting spruce lumber for aeroplane manufacture.

If not overdrawn, the same condition is still true, and especially as there is no commercial demand for this spruce lumber commensurate with its use for its former governmental need, it might prove more than unfortunate to have these forests, now more or less opened up, cut down and destroyed.

To an extent, at least, would it not seem a wise precaution for the Forestry Department to assume jurisdiction or control over some or all of the particularly valuable (for Governmental uses) spruce and through its agency conserve it for future Government requirements?

Yours, very truly,

PACIFIC NORTHWEST LOGGERS' BUREAU.

Mr. FREAR. The Committee has been in receipt, Mr. Secretary, of communications which set forth that contracts let for the building of roads in Oregon were not fairly let; and as to other matters which require investigation, but on which we are unable to pass judgment because we have made no investigation of those matters. The same is true of other conditions which exist down in Oregon, which require hearings by the committee.

There are conditions, however, in Washington State, in regard to the railway there, which, it would seem, ought to be presented to you at this time, because, of course, it is within your power to determine, as I understand, whether or not this sale should be had at this time as it is advertised for September 2 next. I believe it to be the duty of this subcommittee to present these matters fairly and frankly for your consideration at this time in connection with the protest which has been received, and which is one of several protests that have been received in a general way.

The Milwaukee Railway Co.—of which Mr. Ryan was and is one of the executive committee of five, and one of the directors, and at a time, I believe, when he was, and has been throughout the period, acting in the Government service, either as Assistant Secretary of War or in connection with the spruce interests. The Milwaukee Railway for some years past has been planning to build a railroad through to Gray's Harbor on Puget Sound and down the coast from a point to which it has already been extended, Port Angeles. That has been under consideration for some years, as I understand, but the exact route had not been determined.

And I will say that I intend to insert in the record, later on, Mr. Ryan's letter and telegram and Mr. Howe's letter, and also your own order in the matter; but at this time I am devoting this inquiry entirely to the railroad itself, and to the explanation which is made by Maj. Martin H. Ray, who was the inspector sent out by the War

Department to make a report upon this railway, and I quote entirely as I now remember it, but I will give a reference to his report in regard to conditions as they existed then and as they exist out there now.

In the Milwaukee Railway matter he makes this statement, set 5, inclosure 4, allegation No. 2; and the part that I desire to quote will be brief, and it is not necessary to add anything else at this time because I am going to insert the whole reply to Mr. Ryan later on. He says in this allegation of Maj. Howes, No. 2:

That John D. Ryan was director of the Milwaukee; that he was instrumental in giving costs-plus contracts to Siems-Carey-Kerbaugh Corporation, for building a road across Washington (Olympia) Peninsula, which tapped holdings of the Lacey interests and the Milwaukee Land Co.

His finding is [reading]:

Partly true, but of no significance.

Reading further from his finding:

Mr. Ryan was a director of the Milwaukee Railroad as stated. However, for this very reason he asked to be relieved from acting in this connection, and was so relieved until the Milwaukee Railroad was eliminated from the negotiations.

Then he refers to various exhibits. Maj. Ray then quotes from the record; from Mr. Ryan's statement:

That I was a director of the Milwaukee (Chicago, Milwaukee & St. Paul Railway) everybody knew, and you will recall when Disque and the Siems-Carey-Kerbaugh people came on to Washington with a contract which had been negotiated by Disque and signed by the proper official of the Government in the Spruce Production Division, which provided that it was to go in effect when a contract was entered into between the Government and the Chicago, Milwaukee & St. Paul Railway for the building of a certain railway extension to tap areas in which Siems-Carey were to operate, that I went to you (Secretary Baker) and stated that as I was a director and member of the executive committee of the Milwaukee Railway I could not act in any capacity, even advisory, and would have nothing at all to do with it, whereupon you referred the matter to Mr. Stettinius, and in my presence told him that I could not act and that he was to negotiate it, which he did. I never even saw the contract for the building of the railway, which was afterwards made between the War Department and the Siems-Carey-Kerbaugh Co. direct. * * *

That is Mr. Ryan's answer to the charge that you called in Mr. Stettinius.

And this is a matter I want to bring out, which is also contained in Mr. Ryan's letter [reading]:

The Railroad Administration did not approve the building of the line by the Milwaukee Co., but I understood that the contract was signed either by yourself or Secretary Crowell.

This is in Mr. Ryan's letter to you replying to the charge of Maj. Howes.

From that it would appear that the Railroad Administration refused to grant the Milwaukee Railway Co. the right to make an extension, which they wished to make in a place where it would not have had to climb the Olympic Mountains, as was done eventually in the case of the Government road that has been put through over the mountains.

This coast road as surveyed by the Milwaukee would not have reached any particular producing section, so far as I can understand. A railway direct to the coast over the Olympic Mountains would shorten the distance approximately 50 miles, but it would be very costly because it would have to go over the mountains and through

tunnels, as it eventually did when it was put through by Government money.

The Siems-Carey-Kerbaugh Railway or Government railway of 38 miles was built on a direct line over the mountains to within about 15 miles of the coast and shortened the distance by over 50 miles. It was built on a cost-plus contract by that firm acting for the Government.

It will be interesting at this time, and I think we are all especially interested, to have the map before us, because it will explain the situation. [Producing a map of Washington.]

Mr. Secretary, if you have not made an examination, I will say that the Milwaukee Railway extends out to the west extremity of Crescent Lake, Clallam County, Wash. [pointing].

Secretary BAKER. From where?

Mr. FREAR. From Port Angeles. That is the Milwaukee road. The extension which was included in the contract given to the Siems-Carey-Kerbaugh Co. is from Crescent Lake to Lake Pleasant, which is about 38 to 40 miles almost on a direct westerly line to within about 15 miles of the Pacific coast. The scale of measurement of the map will show that.

Secretary BAKER. The scale here shows about 10 miles to the inch.

Mr. FREAR. That would make it about 40 miles long and at an elevation over the mountains, as I will show you, of about 1,100 feet, with tunnels, and built on a scale for a permanent railway, ostensibly for the purpose of striking spruce at the end of the line. You will note that from here, where spruce is located, up to Clallam Bay is only a short distance, but the extension was placed over the mountains from the Milwaukee terminus, and that of course gives the Milwaukee Railroad a short cut across to Grays Harbor, where there is competition with other railways.

Secretary BAKER. Where is Grays Harbor?

Mr. FREAR. Here it is, down the coast. Here is where other railways connect, and there is a large lumber business and many mills at that point.

Secretary BAKER. I do not follow you. There is no connection between this point and Grays Harbor?

Mr. FREAR. Not now but soon. The railway was to go around, not to go over the mountains because of the expense. The understanding has been to go around this peninsula to Grays Harbor. That has been the plan of the Milwaukee road, but apparently the Railway Administration refused to give them the right of extension.

Secretary BAKER. In other words, the road built under the Siems-Carey-Kerbaugh contract is a link in the projected Milwaukee road?

Mr. FREAR. Exactly.

Secretary BAKER. Which they should acquire in line with their projected line just across to Grays Harbor?

Mr. FREAR. That is it exactly; now it is a direct line.

Secretary BAKER. I see.

Mr. LEA. That is the road that they are to sell on the 2d of September.

Mr. FREAR. Yes.

Mr. MAGEE. A line of 38 miles.

Mr. FREAR. Yes.

Mr. LEA. Have you mentioned that this road is constructed as a logging road?

Mr. FREAR. Permit me to carry out my statement.

Mr. LEA. All right.

Mr. FREAR. This road built by the Government did not strike any spruce timber until it reached the 40-mile limit. In fact no railway was needed—but that is not a part of the hearing at this time. I think it will be demonstrated before the hearings are over that a strong argument made by those who have been engaged in this spruce production in the West is that there was no necessity for building any railways, and that the whole proposition could have been handled by the loggers—but that is not a matter for us to determine at this time. We also have the Government estimates and statements that have been submitted in the Ray hearings, as well as from other sources, in regard to that.

Secretary BAKER. It is your plan, undoubtedly, to call Gen. Disque on this question?

Mr. FREAR. Oh, yes.

Now, that is the plan of railway that they adopted, and Disque built railroads whether they were necessary or not, and we can not go behind the returns at this time in that matter, but we want to know the facts, and the public wants to know the facts, I take it.

This road did not strike any spruce timber until its terminal was reached—that is, a distance of 40 miles. Maj. Ray, who investigated Maj. Howe's charges, says, as to allegation No. 5, which allegation was:

This road, according to Kerbaugh, has cost about \$12,000,000, and taps no spruce until it travels over 40 miles, which brings it into the holdings of the Lacey and the Milwaukee Land Co.

Reading at another point, Maj. Ray says:

The statement that the road taps no spruce until it travels 40 miles is practically true. This railroad is 39 miles long and connects the main line of the Milwaukee Railroad with a large stand of spruce near Lake Pleasant. No one denies this allegation, but the decision to build this road was carefully considered and arrived at as the most feasible method of bringing out 300,000,000 feet of desirable spruce.

He then refers to some exhibits, and says:

Also see Gen. Disque's testimony; also the testimony of Pacific & Northwest Loggers' Association.

Then Maj. Ray goes on to say:

No one questions the value of this stand of spruce and the desirability of tapping it. The only question here is, whether or not the judgment of the Government officials in the actual location of the railroad to reach the spruce were justified.

Incidentally, let me say, considerably over 300,000,000 feet of spruce, as shown in the Ray hearings, was cut each year by the loggers from spruce that was accessible to the Columbia and other waters, and that cut could have been easily doubled, as I understand, by doubling the capacity of the mills, increasing working hours, and giving aid to the loggers.

The Siems road, or Government road, connects with the Milwaukee Railway, and the road was determined by the Milwaukee officials very largely.

Allegation No. 3 of Maj. Howe, of the Intelligence Bureau, says:

That Sawyer, formerly chief of engineers of the Milwaukee Railroad, was made a major of the Spruce Production Division, and is building the road which joins the Milwaukee at Joyce, Wash.

And Maj. Ray's finding is:

True, but of no significance.

That is a very frequent finding that he made in this case, it would seem by Maj. Ray, who was sent out to investigate Maj. Howe's charges. He goes on to say:

The Government was building a 38-mile railroad for war purposes. This road was designed to haul spruce logs from an undeveloped forest to the main line of the Milwaukee Railroad. It was necessary, therefore, to coordinate the construction and operation of this road with the policy of the Milwaukee Railroad. Maj. Sawyer was assigned to this duty. No claim has been made other than that in this telegram, now denied, that this was not entirely proper and good judgment.

Maj. Ray says "true," but what of it?

The part fixing the location of the road follows in allegation No. 5, and I quote from Maj. Ray's statement, and he is quoting from Disque's statement. Gen. Disque explains how he located the Government railroad, and says:

We had Mr. Roberts, of the Union Pacific, go over that (the decision as to the most feasible route), and Mr. Caliber, who laid out the Canadian Pacific, go over it, and had Maj. Welch (the S. P. D. chief engineer), and I personally have gone over all the route up there in Clallam County. The Siems-Carey contract to build the railroad was closed in Washington with the provision that the exact route would be determined by me before they began operations, because in Washington Mr. Byron, president of the Milwaukee, put a doubt into my mind as to the advisability of going ahead the way we had planned before we went to Washington, and we left it open and came out here again and went over those lines and then had a meeting in Seattle, attended by Mr. Erling, of the Milwaukee, and his chief engineer, Mr. Roberts, chief engineer of the Union Pacific; Mr. Caliber, who had located the Canadian Pacific; another man who was superintendent of the Milwaukee, Mr. Carey, and myself.

We spent the evening listening to the different arguments, and then I decided to build it via Lake Pleasant, and that decision was concurred in by everyone present.

Up to this time it will be noticed that the Milwaukee Railroad, with Manager Erling, President Byron, and others, are in consultation with Gen. Disque in the determination of location, and the chief engineer of the Milwaukee Railroad, Mr. Sawyer, is made a major in the Spruce Production Division and is given charge of the work.

A logging road, standard gauge, built in Tillamook County, Oreg., October, 1917, cost \$4,500 per mile for roadbed and less than \$10,000 per mile, complete, for standard locomotive road to move the largest logs that are grown. I will state that that is according to a statement made by an officer here in Washington, who can be called if necessary. I have some of the details, which show that a contract was made in the months of March down to October, 1917, with the A. F. Coats Logging Co., of Tillamook County, Oreg. This contract was for the building of 2½ miles of logging road in Tillamook County. The road was standard gauge, 40-foot roadbed, including 25 culverts, 1 bridge, 2 bulkheads, one 450 feet long and one 250 feet long, all graded ready for rails. This road was built as a logging road for permanent use and for use of standard locomotives.

The cost of the road was \$9,900 for 2½ miles, or slightly over \$4,243 per mile. The rails were 45 and 55 pound rails, that cost \$39 a ton, bought of the Northern Pacific. It is estimated that the road could

have been completed at that time—October, 1917—under \$10,000 per mile, and this was sufficient to move the largest logs that could be sawed.

Mr. LEA. What is that report?

Mr. FREAR. That is a statement made to me by an officer in this city and is the estimate of the man who had the contract and actually did build this railroad.

Mr. LEA. I do not think they could grade a railroad as cheaply as he states. I think it impossible.

Mr. FREAR. That is what he said, and I can bring him as a witness if necessary. That is \$9,900 for a 40-foot railroad roadbed in Tillamook County, Oreg.

Now, this Government railroad that we are considering reached an elevation going over the mountains of 1,100 feet from a point of 350 feet elevation, and it is a very abrupt rise and returns to an elevation of less than 400 feet near the coast—a very unusual climb, going right over and through the mountains at that point [indicating on map]. I am now showing you an elevation map that is included in the book on spruce production. It gives the elevation for every mile of this Government railway built for logging spruce.

Two tunnels were built along this new 38-mile railroad, according to the description contained in the spruce book.

In his finding as to the charges filed by Maj. Howes, of the Intelligence Bureau of the War Department, that this road, according to Kerbaugh, has cost about \$12,000,000 and taps no spruce until it travels 40 miles, which brings it into the holdings of Laceys and the Milwaukee Land Co., Maj. Ray says that this is substantially true, but of no significance. He continues:

This statement of cost, according to Lieut. Kerrigan, is based upon a statement made by Mr. Kerbaugh to a manager of the Washington Hotel, Seattle. The road actually cost about \$3,800,000. The same contractor, however, spent at least \$3,500,000 more in other Government operations in the same county. Had the work gone on, they probably would have spent more than \$25,000,000. However, the statement has no significance.

That is, no significance to him. Here is a railroad that up to the present time has cost at least \$100,000 a mile for the 38 miles built, for a logging road, that was planned in a meeting at which Mr. Earling, manager, the Milwaukee's president, and others were present, built by the chief engineer of the Milwaukee road, Mr. Sawyer, who was made a major for the purpose. If that be true, it costs this railway, built by the Government, ten times as much as a logging road that could be built if it were necessary, which is very doubtful. To climb the mountains, of course, was an expensive task. The road has been built as a modern, up-to-date road that can be turned over to the Milwaukee alone, of all railways. It would be of no special value to any individual, because it is useful only for the purpose of bringing out timber or logs, excepting to some railway company that wants to use it for permanent purposes in connection with its own system, and that is the finding of Maj. Ray.

Secretary BAKER. I gather, Mr. Frear, from what you have been saying that you feel there is a possibility that the selection of this road and the location of this road and the form of construction that was adopted looked to the Milwaukee as the ultimate purchaser of the road when the Government was through with it?

Mr. FREAR. I want to present the matter a little further and see if that is not the only construction that can be placed upon it.

Secretary BAKER. This road has been advertised for sale on the 2d of September, and I think something ought to be done there to insure that the Government shall get the value of the property if the Milwaukee does buy it, or that no original covenant is allowed to be carried out by the sacrifice of this property to the Milwaukee road.

Mr. FREAR. That is a thought that I had in mind, to show that the Government was paying a price so excessive, so far beyond any ordinary necessity, for this road, that it certainly calls for an investigation beyond what Maj. Ray carried on.

Secretary BAKER. That may well be, but does not this seem true? If the Government was building a road and the road was to be very useful to the United States it would be very much better to build a road which would ultimately be sold for the extension of a transcontinental route than to build a road which would have to be scrapped when we got through with it?

Mr. FREAR. That would be the construction if your judgment is that a \$100,000 road would be the kind of road to put there for logging purposes.

Secretary BAKER. I am not expressing a judgment on that question.

Mr. FREAR. The question is simple enough. It was proper to build a road identical with the roads we were building elsewhere for the transportation of spruce. You would not build that kind of a road, honestly accepting as a standard roads that were built at other points for logging purposes. They are simply small roads, logging roads, for the purpose of bringing out the spruce.

Secretary BAKER. I am without any knowledge of the physical facts out there, but this seems to me to be true. If you concede the propriety of building a road into that section you have a question of sound judgment to be honestly exercised as to whether it is better to build a cheap railroad, which will have to be scrapped when you get through, or build a different style of railroad which could be sold to a prospective and apparently waiting customer at a fair price.

Mr. FREAR. Let me suggest two points in which you may be in error, Mr. Secretary, where we may have a difference of opinion. There would be no scrapping of a logging road that would be put in to tap 3,000,000,000 feet of timber, of which about 10 per cent is spruce, because other timber outside of spruce could be reached and logged. Any company could buy that railroad, undoubtedly, and make use of it—

Secretary BAKER. And use it purely as a logging road?

Mr. FREAR. And use it purely as a logging road. But there is only one road in existence that can use it for its transcontinental route, and that is the Milwaukee Road.

Secretary BAKER. Obviously you have a case in which very sound judgment was required to be exercised. Whether it was or not I do not know.

Mr. FREAR. I wish to go a little further with this, if I may. The Milwaukee Road will eventually tap 3,000,000,000 feet of timber in the neighborhood of its new terminal, which, of course, would make the Milwaukee Road and Milwaukee Land Co.'s timber of largely increased value. If it is the only purchaser of a \$100,000-a-mile road, of course the Milwaukee can put its own price on it and get

it down to the competitive figures that would be bid by a small logger. That is the only competition that we have to look for. In other awards the Milwaukee is sure to get it, unless it pretends to stand back or deals through third parties.

The Milwaukee mileage value throughout its entire system in 1917, according to the Milwaukee yearly statement furnished me by the Interstate Commerce Commission, was \$60,870 a mile. That includes all of its system, its tunnels; it includes all of its rights of way in all the States from Chicago west clear to Seattle. It includes, I understand, acquiring of its expensive terminals and buying of equipment, some of which was very expensive, and then reaches a little over \$60,000 a mile. Here is a road built by the Government for logging, with practically no equipment, which cost \$3,800,000 for 38 miles of road that was built according to Ray's own finding. And, as stated by Maj. Ray in response to allegation No. 10:

No one denies that the opening up of this new lumber territory will eventually bring more business to the railroad. Further, the natural buyer for the Clallam County Railroad in question is the Milwaukee Railroad. The buyer of this property will undoubtedly buy it at 50 per cent or less of the cost to the Government, due to high cost of materials and labor during the war.

That is the situation, and probably it will not bring 20 per cent of its real cost, and it is evident beyond question, so far as can be ascertained, that the Milwaukee Railroad is the sole beneficiary of this Government railroad as it has been constructed. In the first place we face this proposition at the outset before we make any investigation, apparently authoritative information has reached the spruce production division as well as the committee in one form or another, that it was unnecessary to build any railroads, that loggers could have provided the timber and were fully equipped to do it with the 47 mills they had.

Secretary BAKER. That, of course, is a separate question.

Mr. FREAR. That is a separate question; that was a matter of policy.

The responsible Government officers determined that the railroad should be built. They built it with the aid of Manager Earling's judgment and the Milwaukee Road's president and by Mr. Sawyer, who was the Milwaukee railway's chief engineer. It was built at a cost substantially ten times what a railroad was built for by private parties in 1917, which of course was during the war period.

Secretary BAKER. But in another place and under entirely different physical conditions.

Mr. FREAR. Tillamook is, of course, nearer the coast, and, as I pointed out, Clallam Bay would have been a very convenient point to have reached if spruce had been a consideration. There may be other things brought in, which I do not care to discuss at this time, showing where this road was given assistance and equipment to put it through at that particular place, not to reach spruce until they had gotten to the destination 40 miles away, as they state here. It is a matter for inquiry at least before any disposition of the road should be made. Of course it is water over the wheel; it has passed; contracts have been made, the road has been built; payments have been made, I assume, and now the question is what the Government can get out of it. Possibly we can not get anything out of it except what

the Milwaukee Railroad is willing to give, but that is the situation that confronts us, from Maj. Ray's findings.

Now, Mr. Ryan's connection with the railway becomes interesting at this point. Mr. Ryan is a director on the Milwaukee Railway and has been for years. Mr. Ryan is on the executive committee of five, and has been for some years, of the Milwaukee Railway. Mr. Ryan is the president of the Montana Power Co., as has been shown in the statement I have introduced, the company which electrifies the entire western division of the Milwaukee Railway, known as the Puget Sound Division, with large remunerative contracts. Mr. Ryan undoubtedly has much to do with directing the policy of the Milwaukee Railway and Mr. Ryan was appointed on May 20, 1918, Director of the Aircraft Production that controls the policy of that bureau and controlled the character of railway built by the Government.

Mr. Ryan has testified, as stated yesterday, that he and his predecessor, Mr. Potter, were practically one. They were both related in large copper interests. They were both in the Guaranty Trust Co., which, by the way, is the transfer agent of the Chicago, Milwaukee & St. Paul Railway, the road of which he is a member of the executive committee. Mr. Potter was director from February, 1918, to May 20, 1918, when Mr. Ryan was appointed.

Mr. Stettinius was called in by you to sign the approval. Mr. Stettinius and Mr. Ryan, I understand, were both assistant secretaries of war?

Secretary BAKER. Not at that time.

Mr. FREAR. He was not Assistant Secretary of War at that time?

Secretary BAKER. Mr. Ryan succeeded Mr. Stettinius as Assistant Secretary of War. Mr. Stettinius was Second Assistant Secretary of War.

Mr. FREAR. The contract was made in the East, according to the statement of Mr. —

Secretary BAKER. Oh, there is a little more than that.

Mr. FREAR. I am going to read the whole letter.

Secretary BAKER. But let me state the fact, so it will be clear. The contract was originally negotiated in the West by Gen. Disque, and he brought the record of his negotiations and the contract as he proposed it East in order that it might be approved here and executed here. It was taken over to the Aircraft Division, of which Mr. Ryan was the head, and he at once said he would have nothing to do with it because of his relations to the Milwaukee Railroad. He brought it to me with the statement that this was a contract upon which he could not only not pass but could not advise; that it was a very large thing and required careful examination.

I sent for Mr. Stettinius, who was a man of large affairs, accustomed to dealing with large affairs, put it in his hands, and told him in Mr. Ryan's presence, that Mr. Ryan was related to the Milwaukee Railroad and could have no sort of relationship and that I excused him from having anything to do with it, and I asked Mr. Stettinius to take up the relation at that point.

The contract which was ultimately authorized was the Disque contract as he brought it from the West, modified by the changes which Mr. Stettinius negotiated in it. I think that is it.

Mr. FREAR. That is right. The contract was brought East for approval. Why did Seims, Carey & Kerbaugh have that contract?

Secretary BAKER. I can not answer that; I do not know that.

Mr. FREAR. That is a very interesting question at this particular point, why they were given the contract to build that railway at that particular place and in that remarkable manner. That was in April, 1918, as I now remember; that first contract was in April.

Secretary BAKER. I think it must have been in May, because Mr. Ryan became Director of Air Service in May.

Mr. FREAR. The very first negotiations and the final contract was made while Mr. Ryan was in the Air Service?

Secretary BAKER. Yes.

Mr. FREAR. In fairness to all the parties I will read into the record now Maj. Howes's statement. He was a major, I believe, was he not? He was in the Intelligence Bureau of the War Department in the West?

Secretary BAKER. I think he was, sir.

Mr. FREAR. And he was making an investigation out there of conditions so as to protect the Government, and he was one of the officers under the Intelligence Bureau of the War Department?

Secretary BAKER. Yes, sir.

Mr. FREAR. And he had with him Lieut. Kerrigan, of the same bureau, who made independent investigations with others out in Washington. After he had made certain investigations this telegram was sent from Portland, Oreg.:

PORTLAND, OREG.,

Received November 23, 10.25 a. m., 1918.

Code.

MILSTAFF, Washington.

(Personal and confidential.)

Lumbermen of the Northwest unanimous in demanding Federal investigation of lumber situation. Their principal contentions are: That John F. Ryan was director Milwaukee Railroad; that he was instrumental in giving cost-plus contracts Seims, Carey, Kerbaugh Corporation for building railroad across Washington Peninsula, which tapped holdings of the Lacey interests and the Milwaukee Land Co.; that Sawyer, former chief engineer of the Milwaukee Railroad, was made major in Spruce Production Division and is building the road which joins the Milwaukee at Joyce, Wash. Ryan approved the lending of \$6,000,000 to the Seims, Carey, Kerbaugh Corporation and the copy of the mortgage is on file in Clallam County, Wash., approved by Assistant Secretary of War Crowell. This road according to Kerbaugh has cost about \$12,000,000 and taps no spruce until it travels over 40 miles, which brings it into the holdings of Lacey and the Milwaukee Land Co. J. J. Donovan, of Bloedel Donovan Lumber Co., formerly owned stock in Port Angeles and Southern Railroad, which was bought over by the Milwaukee. He is also a director in the United States Spruce Corporation and close friend of J. D. Ryan. He holds contract with Seims, Carey, Kerbaugh to cut part of the 500,000,000 feet of spruce which company has contracted to log.

That was the contract that Gen. Disque put up to the loggers, but their contract was only for 250,000,000 feet, just one-half of that.

Secretary BAKER. The demand for increased spruce production was growing all the time.

Mr. FREAR. Now, just let me say, by way of parenthesis, that I do not care to introduce all the testimony that Maj. Ray had of the various parties, because we are trying to confine this to one matter. But Mr. Donovan wrote that he had no interest in this matter, although he was one of the directors of the Spruce Production Corporation.

(Continuing reading:)

He built mills to handle side cuts from this milling and has contract which will net him profit of at least \$10 per thousand. Seims, Carey, Kerbaugh built \$2,000,000 mill at Port Angeles, Wash., while lumbermen contend it was unnecessary and use-

less without building of million dollar breakwater on Sound. No spruce yet milled from this project. Also built mill at other end of railroad, costing about \$1,000,000, and no spruce has been milled from this. These two mills were built on cost-plus contracts at Government expense and are so located that, in conjunction with the railroads which have been built, these men will be able to control lumber industry, and Carey contends they are in the game to stay.

Carey was one of the contractors on the Warren spruce production contract, and their contract amounts to substantially \$25,000,000 for cutting spruce, part at the rate of \$100 and part at \$60 per thousand.

(Reading:)

In Grays Harbor district Disque gave Alex Polson, of Polson Logging Co., contract in March this year to build road which would tap Quinault Reservation with 200,000,000 feet Government-owned spruce.

That is interesting, because it may have a further direct bearing on the matter, and we are anxious to have it considered in all its phases. Mr. Polson was at Grays Harbor and asked for a short railway to reach 200,000,000 feet of Government forestry spruce.

(Mr. Frear here exhibited a map and pointed out the location of various places referred to.)

Mr. FREAR. Polson was given the contract, and that was to touch 200,000,000 feet of Government-owned spruce, but the complaint of Polson was that he could not get the material with which to build a logging road, although it was given to the Seims, Carey, Kerbaugh Co. for a transcontinental railroad. That is a controverted matter, regarding Polson and, I am frank to say, one to which I have given no consideration. It has not been investigated, but it should be and has a bearing on the necessity for the building of this expensive Government road.

(Continuing reading:)

Hutchinson was sent by Disque to supervise building of 6 miles of this road—

And they had a great deal of trouble. Polson, as I remember, claims that Hutchinson was holding them up, particularly in the matter of driving piles, building bridges, etc.

(Continuing reading:)

And started in May. This was never completed as Disque would not give necessary equipment. Polson had remainder of road graded and ties and rails ready. Polson contends that if allowed a free rein he could have completed the 6 miles of road by July 1, and would have tapped Government timber in the Quinault Reservation. On the other hand, Seims, Carey, Kerbaugh, were given all equipment necessary for tapping privately owned timber. In the Newport, Oreg., district—

That is where two railways were built out from Newport north and south.

(Continuing reading:)

The Warren Spruce Co., working on cost-plus contract, received all equipment and men necessary, tapped privately owned timber, and spent \$5,000,000, but delivered no spruce on these cost-plus contracts.

Preliminary investigation indicates that railroads are attempting to dominate lumber industry of Northwest at Government expense and in collusion with Government officials and Army officers. Indications of huge graft in large transactions. The continued investigation of which will involve large people and calls for commission of great power. Any further work we might do at present might jeopardize the larger investigation which will be necessary to prove these contentions. This situation very serious and calls for careful consideration. Wire instructions at once. Time important factor.

HOWES,
Military Intelligence Officer.

That telegram was dated November 23, 1918. On December 3, 10 days later, Mr. John D. Ryan, address 42 Broadway, New York, sent the following letter to you, apparently having received a statement of the charges from you as made by Mr. Howes. This is his answer, and it takes up charges so far as they relate to him, and that is all he is concerned in and all that I care to read into the record here.

Secretary BAKER. I am perfectly familiar with it; you need not read it for my sake.

Mr. LEA. Your purpose is to insert the whole letter in the record?

Mr. FREAR. Yes; insert all this in the record.

(The letter referred to is here printed in the record in full:)

JOHN D. RYAN,
42 BROADWAY,
New York, December 3, 1918.

To the SECRETARY OF WAR,
Washington, D. C.

SIR: I have before me copy of a telegram addressed to Military Intelligence and signed Howes, that I believe in fairness to myself, Gen. Disque, and others, who have had to do with matters in the Spruce Production Division of the Bureau of Aircraft Production, and later in the Spruce Production Corporation, should be answered by me with a plain statement of the facts, as far as I know them, and as they relate to the charges made by this representative of the Military Intelligence Bureau.

I think it is necessary to go into the charges at some length, and for the purpose of answering them as specifically as possible I am paragraphing the telegram and numbering the charges and answering them where I can by number.

Allegation No. 1: As to whether the lumbermen of the Northwest are unanimous in demanding Federal investigation of the lumber situation, I have no information, but I do know that Gen. Disque telegraphed me immediately upon the publication of the Hughes' report which recommended an investigation of the Spruce Production Division, that in justice to himself and the whole organization, the investigation should be made and immediately.

That I was a director of the Milwaukee (Chicago, Milwaukee & St. Paul Railway) everybody knew, and you will recall, when Disque and Seims-Carey-Kerbaugh people came on to Washington with a contract which had been negotiated by Disque and signed by the proper official of the Government in the Spruce Production Division, which provided that it was to go into effect when a contract was entered into between the Government and the Chicago, Milwaukee & St. Paul Railway for the building of certain railway extension to tap areas in which Siems-Carey were to operate, that I went to you and stated that as I was a director and member of the executive committee of the Milwaukee Railway I could not act in any capacity, even advisory, and would have nothing at all to do with it, whereupon you referred the matter to Mr. Stettinius, and in my presence told him that I could not act, and that he was to negotiate it, which he did. I never even saw the contract for the building of the railway, which was afterwards made between the War Department and the Siems-Carey-Kerbaugh Co. direct, as the railroad administration did not approve the building of the line by the Milwaukee Co., but I understood that the contract was signed either by yourself or Assistant Secretary Crowell.

(2) Allegation-No. 2: Answering the charge that I was instrumental in giving cost-plus contracts to Siems-Carey-Kerbaugh for building a railroad across Washington Peninsula, which tapped holdings of the Lacey interests and the Milwaukee Land Co., which company is owned by the Milwaukee Railroad, I will say that as to the railroad contract, I have answered above. As to the contract for the production of spruce, a contract with Siems-Carey-Kerbaugh Corporation was made by Disque in April. My official connection with the aircraft work began on May 20, on the signing of the Executive order creating the Bureau of Aircraft Production. When I saw the contract I did not think the Government was properly protected, and referred it to Mr. Stettinius, with the request that he negotiate a new one to take its place. After he had spent several days upon it and made certain recommendations he sent it back to me with the statement that as the Milwaukee Railroad was out of the matter entirely, and the Government was building the railroad itself, he saw no reason why I should not act in the matter of the spruce production contract. The original contract was dated, I think, April 18. The new contract to take its place was negotiated by the attorneys of the Aircraft Board and Mr. C. F. Kelley, of New York, whom I called in as counsel, to get the benefit of his experience and advice in order to better protect

the Government's interests. A reference to these two contracts, the one which had actually been signed over a month before I had anything to do with the aircraft work and the one that took its place, will enable anyone properly qualified to judge whether or not the Siems-Carey Co. secured any advantage through my connection with the negotiations.

(3) Allegation No. 3: I never knew or heard of Sawyer, formerly chief engineer of the Milwaukee Railroad, until I went to visit the operations about the 1st of August; he was then an officer in the United States Army.

(4) Allegation No. 4: The negotiations with the War Credits Board for a loan to the Siems-Carey-Kerbaugh Corporation were carried on by their own representatives with the War Credits Board direct, and I had no connection with them. I think formal approval of the loan was given by yourself or Mr. Crowell, but I am not certain as to this.

(5) Allegation No. 5: As to the statement that "the road has cost about \$12,000,000, according to Kerbaugh," I am not able to answer, because I don't know what Kerbaugh said about it; but the actual cost (and the road is finished) was \$3,800,000, including all work preparatory to complete operations. The expenditures for logging, road extensions, mills, and all other operations in connection with the Siems-Carey contract aggregate to date about \$3,200,000, the work has been stopped and negotiations for the cancellation of the contract are being carried on. From my observations at the time of my visit to the work, I have no doubt that investigation by properly qualified engineers will prove that the work has been done at reasonable cost under the circumstances, and, in my opinion, the performance is one that could not be excelled as to time, and time was the very important factor in the whole operation.

(6) Allegation No. 6: I never met J. J. Donovan but once in my life prior to my visit to the Spruce Production Division, and that was about two years before on a railway train returning to New York from Pittsburgh after a conversation of the National Foreign Trades Council which we both attended. I had no social, personal, or business relations with him, except on that one occasion. He was selected as a director of the Spruce Production Corporation upon the recommendation of a large number of men whom I thought were patriotically endeavoring to help the Government in its efforts to meet a very great need of the Army.

As to whether Donovan holds subcontract with Siems-Carey-Kerbaugh to cut part of the spruce contracted to be furnished by said company, I have no knowledge.

I have no knowledge as to whether or not he (Donovan) built a mill to handle his part of the contract.

(7) Allegation No. 7: As to whether the mill built at Port Angeles, Wash., by Siems-Carey Co. under their contract with the Government was unnecessary and useless, competent persons should investigate and report. My own opinion is that it was absolutely necessary and had to be done if we were to get the spruce that would have been required if the war had not ended as early as it did. One of the largest saw mills in the world is located at Port Angeles and Siems-Carey tried to buy it but could not do so at a reasonable price.

No spruce has been produced from any of these operations as it was all dependent on the building of the railroad, which was completed about the time of the signing of the armistice.

The mill at the other end of the railroad (at Lake Pleasant) was provided for in the Siems-Carey contract and necessary to carry it out.

(8) Allegation No. 8: These two mills were built on cost-plus contracts as stated. As to their location so that "these men will be able to control the lumber industry and that Carey contends that they are in the game to stay," I have to say that any one or two mills would have great difficulty in controlling the lumber industry of the Pacific Northwest, and I do not see where they would have the advantage over anyone else in the district. Carey stated at the beginning of the negotiations in which I had part that they did not expect to ever secure any profit from the contract, except to the extent that they were able to amortize and reduce the cost of the plant to the Government and take it over on an appraisal that would enable them to engage in the lumber business. That was, I believe, the chief incentive in their making the contract and never disguised as far as I know.

(9) Allegation No. 9: I spent the greater part of a long day in going over the Polson operations, much of it in company, and frequently alone, with Alex Polson. He made no statement to me that would indicate that he had been hampered by Disque in his work of getting his railroad finished, and both Disque and myself impressed upon him in every way that we could the necessity for his getting the job completed as soon as possible. If he had any complaint to make of the nature stated in this telegram I am sure he would have made it to me then.

(16). The facts regarding the Warren spruce contract can be determined upon investigation. I did not see their operations and the contract was entered into long before I had anything to do with the work of the Spruce Production Division.

(17), (18), (19). Can only be answered after such investigation of the charges as should and I hope will be made.

While I feel it is entirely unnecessary, as far as you are concerned, for me to enter any denial of the knowledge of graft, large or small, in connection with these operations, I want to enter on the record my emphatic statement that I have no such knowledge and do not believe, as a matter of fact, in the existence of any such graft, and I am certain it will be proven upon investigation.

I interviewed a very great number of men who were directing the most important lumber operations in the Pacific Northwest at the time of my visit there in July and August of this year. With the exception of one or two who had attempted to secure contracts and failed for reasons which seemed entirely satisfactory to me when explained, I heard no comment that was unfavorable as to the conduct of the Spruce Production Division and its affairs.

The necessity for producing an article that had never been secured in anything like the quantity required and for getting it in the time that it had to be produced made it necessary to enter into these large contracts, and I am certain that persons qualified to pass upon the whole question will bear me out in the statement that the work was well conceived and carried out and that the Government had every protection that could be afforded by an organization of able, honest, competent men who were well equipped to carry out the undertaking.

Respectfully, yours,

JOHN D. RYAN.

Mr. FREAR. Four days after the letter was received from Mr. Ryan—no official action appears to have been taken until after he had made his official explanation?

Secretary BAKER. That is not the fact.

Mr. FREAR. So far as the record shows.

Secretary BAKER. Let me add to the record. I received a copy of the Howes telegram; it is dated the 23d, as I remember. On the 27th of November I sent the telegram with this memorandum to the Chief of Staff:

WAR DEPARTMENT,
Washington, November 27, 1918.

Memorandum for the Chief of Staff.

The Inspector General investigated this spruce situation, and in a report dated some time in July covered all the features of the situation as it then existed.

I think this ought to be put in the hands of the Inspector General with directions to send every competent man to the Northwest to investigate the things here referred to, and also to bring down his report on the whole situation to the present time. It may be important for the Inspector General to know, in conducting this investigation, that the contract referred to in this memorandum as having been made by Mr. Ryan, a director of the Milwaukee Railroad, was in fact made by Mr. Stettinius, for the reason that Mr. Ryan, being a director of the Milwaukee Railroad, declined to participate in any way in the matter; and, as Mr. Stettinius was then Second Assistant Secretary of War, I placed the whole matter in his hands and asked him to supervise the negotiations, which he did.

NEWTON D. BAKER,
Secretary of War.

That was on the 27th of November. The Howes telegram with allegations with regard to Mr. Ryan was called to his attention by me, and he sent me a letter in reply, which is the letter you have introduced in the record. On the 7th of December, 1918, I made this memorandum for the Inspector General.

Mr. FREAR. That is what I was about to read.

Secretary BAKER. I will read it if you will permit me.

WAR DEPARTMENT,
Washington, December 7, 1918.

Memorandum for the Inspector General.

I hand you herewith letter to me from the Hon. John D. Ryan, late Second Assistant Secretary of War and Director of Air Service. Attached to Mr. Ryan's letter is a copy of a dispatch sent to the Chief of Staff from Portland, Oreg., in November. Mr. Ryan's observations are addressed to the statements made in this telegram.

Your office made an investigation of the Spruce Production Division some time in May or June; I recently directed the Chief of Staff to have that investigation continued and brought down to date. The inclosed papers are sent in order that they may be put into the hands of the member of your force who is continuing the spruce investigation, and may be made by him the basis of thoroughgoing inquiries. I have personal knowledge of the facts stated by Mr. Ryan with reference to the Siems-Cary-Kerbaugh contract, as stated in numbered paragraph 2. Mr. Ryan stated to me that by reason of his relationship to the Milwaukee Railroad it was wholly impossible for him to take any part in the negotiation or approval of that contract. I thereupon asked Mr. Stettinius, who was at that time Second Assistant Secretary of War, to take the matter up and carry it to completion, which he did.

The work of the Air Service brought to Washington and into the service of the Government elsewhere, a large number of men of unblemished reputations, unquestioned integrity, and great talent as men of business and affairs. The task to which they came was novel, of great magnitude and difficulty, and was required to be performed with such speed as to make it impossible to develop this new and great business slowly and conservatively. The investigation made by the Attorney General and Judge Hughes, and many investigations made by me or by my direction have satisfied me that this work was performed with singular efficiency, breadth of imagination, and fidelity. That there were here and there, in minor and subordinate places, unfaithful servants, has been discovered and corrected; but the Government owes to these distinguished men who have served it a debt of appreciation for which there is no payment possible. The Government has also an obligation in the matter; it must protect the reputation of these men against unwarranted assault and suspicion. I therefore desire the investigation of the Spruce Production Division to be thorough, and such records made and kept as will always be available to protect the reputations of those who have participated in this great work, and also to protect the War Department against the assaults growing out of misunderstandings, business rivalries, personal jealousies, or any other unworthy cause. Needless to say, I want no limitations put upon the investigation, but wish any wrongdoing discovered called promptly to my attention with recommendations as to modes of redress.

NEWTON D. BAKER,
Secretary of War.

That was the basis upon which the Inspector General sent Maj. Ray to make an investigation and report. Maj. Ray's report was then made, and the 1st day of February, I assume it is, the Inspector General made the following reply to the Chief of Staff:

Your attention is invited to the report of investigation pertaining to Spruce Production Division made by Maj. M. H. Ray of the Inspector General's Department. Under verbal instructions from the Secretary of War I visited Portland, Oreg., during the progress of this investigation and personally went over with Maj. Ray this whole deal. I have carefully examined the within report and concur fully in the views and conclusions contained therein.

Special attention is invited to Maj. Ray's conclusions on pages 47 and 48. Attention is also invited to the analysis of allegations Nos. 12 and 13, pages 30 to 33, inclusive, with special reference to paragraphs marked (a) and (b), page 33. The allegation No. 12 has reference to the Siems-Cary-H. S. Kerbaugh Co., which contract appears to be the main cause of irritation.

That is signed by Inspector General John L. Chamberlain. Accompanying that was brought to my attention the report of Maj. Ray, as to which I think you have referred to some of the conclusions. Perhaps it would be wise to read into the record at this point the conclusions of the inspector, Maj. Ray, which Gen. Chamberlain approved after a careful examination of the record and discussion with Maj. Ray.

Mr. FREAR. Of course, that is of a large number of pages?

Secretary BAKER. No; only one page. What I particularly desire to have appear here is that the investigation which I had was made by Maj. Ray, and that in addition to sending the Inspector General personally to the coast so that he could supervise the inspection and see that it was carried out thoroughly and promptly.

Mr. FREAR. At this time Maj. Howes was in the Intelligence Bureau, and he had sent the telegram to his chief here in Washington?

Secretary BAKER. Yes, sir.

Mr. FREAR. After whatever investigation had resulted up to that time with himself and his brother officers, Maj. Ray—who, by the way, seems to have been a very competent officer so far as his ability goes—was sent out to the coast to investigate conditions and to make findings as to the actions of his superiors, including lieutenant colonels and colonels and the general, and to pass upon their actions as well, inferentially, upon those here in Washington who might have any connection with the matter?

Secretary BAKER. He was directed to make his findings subject to the approval of the Inspector General of the Army.

Mr. FREAR. It does not appear anywhere so far as I know, but let me ask you at this time if it is so, that the Inspector General went around with Maj. Ray to these various hearings?

Secretary BAKER. I can not answer that. He was there, but how far he participated I do not know.

Mr. FREAR. The reason I am asking that is this: If you will look at the testimony taken by Maj. Ray you will see that in many cases he notifies the subordinate officers and the privates who are to appear before him—he warns them of the danger of making any statement which will incriminate them, and he puts them upon their guard against anything they might do to their own injury. That is a very unusual proceeding, I assume, and you will find it throughout the record.

Secretary BAKER. Oh, it is an absolutely customary proceeding, and is required of inspectors in order that they may not give immunity from prosecution.

Mr. FREAR. I understand. And consequently the effect of that, with men who have no particular interest in disturbing conditions, is that they would hesitate to put themselves into a position which might possibly incriminate them or invite trouble, and, if in the service, they would hesitate to incur the displeasure of their superior officers; would not that be naturally so?

Secretary BAKER. Mr. Frear, the Inspector General's Department is absolutely independent of every other department in the Army, and a major or second lieutenant who has the authority of the Inspector General for an investigation can investigate a major general, and they do it, fearlessly and without color.

Mr. FREAR. The point I am coming to is that Maj. Ray called before him many witnesses, privates and others in the service, and he advised all those people that anything they said might be used to incriminate them, or advised many of them. Now, would not the tendency of that be to place upon the witness who was being examined a fear of the ultimate consequences of any statement he might make?

Secretary BAKER. He would have nothing to fear if he told the truth.

Mr. FREAR. But, Mr. Secretary, if you have had any experience in the Army you must know that a man who is a subordinate in the Army who makes a statement which may reflect upon his superior puts himself in a position where he may be subject to punishment.

Secretary BAKER. Not if he tells the truth.

Mr. FREAR. Let me say, as one who has had actual experience in the Army, that that is a fact, whether he tells the truth or not. His superior is in a position to inflict punishment upon him directly or indirectly.

Secretary BAKER. The whole theory of the Inspector General's Department is that the records are confidential, so that men will be free from any fear of the consequences of their testimony. The only danger that a man is in is not telling the truth.

Mr. FREAR. Here is a man—we will say Lieut. Kerrigan, for instance, who made these investigations, or a captain, or whoever it may be. He is called in to testify. Here is Maj. Ray presenting his interrogatories. Here is the Inspector General, if he appears there. Then this private or this officer is in that atmosphere. Do you expect to get a hearing that will be fair when you advise a witness that anything he says may be used to incriminate him when the matter about which he testifies is only of public interest? Is not the effect of all that to prevent just exactly what you desire to secure, Mr. Secretary?

Secretary BAKER. Of course not. The whole theory of Anglo-Saxon justice is based on that. You are a lawyer, are you not?

Mr. FREAR. Do you know of any situation outside of the Army Regulations where there is provision for any such statement being made to a witness?

Secretary BAKER. Of course; in every court you have just that process.

Mr. FREAR. Did you ever hear any such statement made to a witness, that any statement he makes may be used to incriminate him?

Secretary BAKER. Of course, judges always tell witnesses that they have the privilege of declining to answer.

Mr. FREAR. Oh, that is true when the matter concerns the witness himself and he appeals to the court; of course, he has that right, but only exercised at such times.

Secretary BAKER. That is, when he is in a formal hearing, and when he is backed by counsel. But here men are brought in who are unprotected, and in order not to trip them by the absence of counsel the Inspector General's force always say to the man, "Now, you have no counsel here, and therefore I tell you that anything you may say that may tend to incriminate you will be used, so you may decline to answer questions which have that tendency." It is for the protection of the witness, and as for his being terrorized or afraid of the superior rank of the Inspector General or anybody in his force, I do not believe that is so.

Mr. FREAR. That is because you have not personally come in contact with that phase of Army life, Mr. Secretary. I say that seriously.

Secretary BAKER. I can not see why a man should be any more afraid of the Inspector General than he is of a judge.

Mr. FREAR. Here is a private who is subject to orders by his commanding officer. He is obliged to and constantly does hold that man in high respect, possibly actual fear. That officer may be a lieutenant. Next comes the captain, then the major, then the lieutenant colonel, and so on. An order to the private given by any of these officers, his superiors, must be implicitly obeyed.

Secretary BAKER. Of course.

Mr. FREAR. Now, this man is subject to punishment by them, directly or indirectly, either by degradation in work to which he maybe put or more serious punishment, and if you know anything about Army life—I am sure you do; I do not think the Army entirely changes—you know that there is not only a great respect, but a certain fear among the enlisted men ordinarily of doing anything or saying anything that will reflect upon their immediate superiors.

Secretary BAKER. It is just like any other human relation, Mr. Frear.

Mr. FREAR. There is a difference in this, that the opportunity for punishment, direct or indirect, the opportunity for inflicting humiliation and all that, rests with the officer, and it all depends upon the personality of the officer as to what he will do, and you can not govern that.

Secretary BAKER. That is not the question. There is not an officer in the Army of the United States that does not know that his success as an officer depends upon the respect that his men have for him. And there is not an officer in the United States Army who does not know that injustice or oppression or terrorism or repression will forfeit the respect of his men. In consequence, the successful officers in the Army are those who are most just and most known to be just.

Mr. FREAR. Certainly. We have no point of difference there, and yet there are many officers in the Army who are not successful and who are arbitrary and unjust?

Secretary BAKER. Undoubtedly. Army officers are not picked from the angel class, and we get some now and then who are oppressive and unjust, and they lose out.

Mr. FREAR. Surely; but let us not get away from the point. I am taking the position of the private who is under that officer; I am taking the position of the man who has his superior officer before him while he is on the stand. In that situation when he is advised that anything he may say may be used against him, he is put in a position of fear.

Secretary BAKER. But the point you are raising is that Maj. Ray's inquiries were not conducive to a complete exposition of the facts, because the private may have been afraid of the major?

Mr. FREAR. The private, or Lieut. Kerrigan, or others there would be placed in exactly that position.

Secretary BAKER. Or even afraid of the Inspector General. My answer to that is this, that while it may be there are officers in the Army who are not considerate and not conciliatory in approaching witnesses when they are offering this testimony, the fact that the man is selected by the Inspector General of the Army or the Inspector General's department would seem to indicate that he had a method of approach which would inspire the confidence of witnesses.

Mr. FREAR. There is where we separate, Mr. Secretary, because you are determining this entirely from a position of the inspector, the

major, and the general, and I am trying to analyze it from the position of the witness who faces these officers and who does not know about that as usual. And I submit the answers to show the truth of that situation.

Secretary BAKER. But, Mr. Frear, you are trying to settle it on the basis of a broad theory, and I am trying to settle it on the basis of fact. I spend a very large part of my time reading reports from the Inspector General, and the evidence which the Inspector General takes, and he gets the truth and the facts. I do not see any shrinking and timidity upon the part of the witnesses before him.

Mr. FREAR. You do not? I can take the Ray report and show to you—we can not go through it at this time—but I can show to you the hesitation and failure of witnesses to testify to matters about which they seem to be well informed or where they had made statements outside, but where the moment this statement was made to them and they feared that they might incriminate themselves, in the presence of their superior officers—

Secretary BAKER. I can not pass on this record, because I have not read all of it, but this is true. If there is anybody who knows anything which he either represses or suppresses out of fear or favor or inducement or any other reason, he ought to be procured and brought before a tribunal where he will have no fear or favor and gotten to tell the whole truth.

Mr. FREAR. We are perfectly agreed on that, and if we fail to do it, it must be because of the breaking up of the organization; otherwise he will have the opportunity.

Secretary BAKER. Let me read this, showing my action in this matter. I read now the conclusions of the entire case stated by Maj. Ray:

CONCLUSIONS ON ENTIRE CASE.

1. That the sending of the "Howes telegram," which initiated this investigation, and the serious charges made therein regarding the integrity of Government officials were entirely unjustified, and that these charges were forwarded before any proper attempt was made to check and to substantiate them, and that the officers who prepared this telegram showed a lack of appreciation of the seriousness of their duties and responsibilities.

2. That no evidence of "graft" or dishonesty has been produced.

3. That no evidence of malfeasance of office has been produced.

4. That the spruce production division was a growth from a small group of officers to an organization with a personnel of 1,200 officers and 30,000 enlisted men. That between the time of its organization in November, 1917, and the close of the war, a year later, there was a lack of organization, extravagance, and a corresponding high cost of operations in gradually lessening degrees, and the condition being more or less justified by very rapid expansion under war conditions: frequent necessary changes in policy, the nonexistence of similar operations from which trained men could be drawn, and to the well-recognized difficulties of obtaining supplies and equipment of the kind needed.

5. That much unfavorable talk and gossip regarding these operations may be traced to the indiscretion of Lieut. Col. Reuben Hitchcock in stating publicly that Gen. Disque was not in accord with all the terms of the Siems, Carey, H. S. Kerbaugh contract, thereby giving the impression that some one in Washington forced this contract onto the local authorities.

6. That the suspicion just stated, along with the failure of Washington, D. C., to order compliance with the Hughes recommendation for an investigation of the spruce production division, formed a chain of circumstantial evidence on the basis of which the public is justified in being suspicious.

7. That many subordinate officers of the spruce production division, who were unfamiliar with the broad policies of the work, engaged in criticism of these opera-

tions with persons in the service and with civilians, and that such talk is still going on, and may cause further complaint to Washington, D. C.

8. That the spruce production division performed in a commendable manner the task assigned to it; that it produced suitable airplane lumber in sufficient amounts to meet all requirements, and that in this connection the officer in charge showed marked administrative ability.

9. That the statements made in the Hughes investigation report (allegation No. 15) have created an impression which is unjust to the spruce production division and its personnel, and that the only way to remedy this is to give the same wide publicity to correction of this report as was given to the original report.

10. That the head of the division has taken and is taking proper steps to protect the interests of the Government, not only in the work of spruce production, but in the final disposal of the properties and equipment no longer needed.

I want to make only one comment. Maj. Ray says that the failure to order the investigation suggested by Judge Hughes created a basis for criticism and gossip which was prejudicial and unjust. The Inspector General had made an investigation which brought the whole situation down to the month of June or July, and was under instructions to make it a continuing investigation. In November and December, as I have indicated by the orders which I made, one to the Chief of Staff and the other to the Inspector General, a comprehensive investigation was directed to bring that report down to the latest date, although in my judgment Maj. Ray misstated what he meant. Perhaps he meant that the public did not know an investigation was being made, and that was the reason the criticism was going on.

Mr. FREAR. But the situation is, Mr. Secretary, as you are probably aware, that constant criticisms are being pressed to-day and affidavits forwarded as to conditions, which are, of course, rather serious if the facts are proven to be as stated in the affidavits—a situation that, unexplained, would be very hard to understand. But Maj. Ray's conclusion was that there was nothing substantially wrong. I have forgotten the term he used.

Here is a condition that does confront us, which has a serious aspect, when the Government of the United States builds a road 40 miles away in order to get timber, when that amount of timber has been furnished and could be furnished by the loggers in the country to begin with. The next point is that that road cost \$100,000 a mile, without equipment, which is nearly twice as much as the Milwaukee Railway cost in all of its operations in other places. It is a standard road, if you will examine the pictures there, a very remarkable road; not necessary, as everyone must agree, for the purpose of logging. And here is a condition where the Milwaukee road is the only company that could make any possible use of such a road, built by the superintendent of the Milwaukee road, located by Mr. Earling. And over all this, as I have said—I mean no reflection upon your department at all—was the gentleman who was most interested, who had that great contract for electrifying the road, who was one of the men on the executive committee. His position is that he did not sign the contract—

Secretary BAKER (interposing). Oh, no; that is not his position. Quite the contrary.

Mr. FREAR. Of course, some negotiations had been made then.

Secretary BAKER. His position is that he did not only not sign the contract, but would not advise about it; that the thing had to be determined quite apart from any consideration of him.

Mr. FREAR. And when he did advise about it, when he brought in Mr. Kelley to advise about it—Mr. Kelley is on the directorate of the Anaconda Copper Co.

Secretary BAKER. Who brought Mr. Kelley in?

Mr. FREAR. Mr. Ryan.

Secretary BAKER. I do not understand that Mr. Ryan brought Mr. Kelley in.

Mr. FREAR. Yes; I do not know whether you will find that in this letter or not, but I think it is there.

Secretary BAKER. Mr. Stettinius was the man who passed on the Siems-Carey-Kerbaugh contract.

Mr. FREAR. Mr. Stettinius was the man who passed upon it, as you desired, in the place of Mr. Ryan, but I am speaking about the Siems-Carey-Kerbaugh contract which was presented to Mr. Ryan. Referring to allegation No. 2, Mr. Ryan says:

The new contract to take its place was negotiated by the attorneys of the Aircraft Board and Mr. C. F. Kelley, of New York, whom I called in as counsel to get the benefit of his experience and advice in order to better protect the Government's interests.

He is a director in the same copper company with Mr. Ryan. A resident also of Montana.

Secretary BAKER. That is a phase of it that I know nothing about.

Mr. FREAR. But it is one that he knows of, certainly, and is an interesting phase in view of all the circumstances.

Secretary BAKER. Oh, I am entirely in accord with you in believing that a final clearing up of the situation is desirable.

Mr. FREAR. We know this, Mr. Secretary, as lawyers, that one of the first principles we were taught was that circumstantial evidence is far more important than direct evidence, at times.

Secretary BAKER. Yes, at times; but if you take circumstances alone you can make a case against anybody on any subject.

Mr. FREAR. I think you will admit that the circumstances here were such that a man in the position of controlling authority there at Portland was called upon to exercise a good deal more caution and a good deal more judgment than was exercised?

Secretary BAKER. I will not say that; I will say that in serving the Government they were called upon to exercise the highest degree of caution and fidelity.

Mr. FREAR. What kind of man was put there?

Secretary BAKER. Disque?

Mr. FREAR. Yes.

Secretary BAKER. Disque was a man of very great skill and ability.

Mr. FREAR. Who was he and what had he done? I had not intended to go into this at all.

Secretary BAKER. He had been an Army officer, but he had retired from the Army. He was employed, as I remember it, as superintendent of a model penitentiary, a man of skill and great ability in dealing with men. He went to the Pacific coast and found the labor situation there perhaps the most acute and unmanageable there was in America. The I. W. W. forces were stronger there than anywhere else in the country, while the forces of organized labor associated with the American Federation of Labor were perhaps less strong there than anywhere else in the country. The situation was one of the most acute and complicated labor difficulties. There were

disagreements between the producers of lumber and the labor in that lumber-producing district. There were all sorts of business and personal rivalries and jealousies. There may have been political conditions involved; I do not know.

Disque was dropped into that maelstrom and came out of it having organized the workers in the timber district up there into a patriotic, loyal legion under a constitution which dedicated them and their services to the service of the Government out of purely patriotic purposes. They cut across all of their ancient differences and forgot all of their old disputes, their old socialistic and political differences, and went to work on this job. That was an inspiring instance of leadership.

Mr. FREAR. Of course, I would like to continue your remarks as to what happened to this organization that was formed in the way you speak of, and what Gen. Disque's difficulties were with regard to it; but I want to say this, if I may: Capt. Disque was a captain in the Quartermaster Corps in 1915; he had been in the service for some years. He was given a position, as I understand from the record, for several months in the Michigan Penitentiary as warden. He then resigned.

Secretary BAKER. A model institution, by the way.

Mr. FREAR. A model institution, possibly we may discover, but I do not care to pass upon it now, because there is an investigation going on at the present time, as you may know.

Secretary BAKER. I did not know that.

Mr. FREAR. I have that information. I do not care to take up that phase of it at this time; and let me say in fairness to Capt. Disque that I do not know that it reflects upon him, except as to the large expenditure of money and difficulties with respect to managing it in a business way.

Disque came East, without any previous experience in the handling of men, so far as was known, outside of that brief experience which he had there, and he was placed in charge of this tremendous piece of work. He employed 30,000 men, as you say, a captain in two years promoted to general.

There was a peculiar situation; one, I think, that is rarely equaled. These men were exempted from Army service, given positions there at the same rate of pay given people outside, and their insurance was paid by the Government; whereas our boys over at the front, nearly 2,000,000 of them, were risking their lives, received \$1 a day and were paying their own insurance; and yet, under this arrangement made by Col. Disque and acquiesced in by the labor leaders, these men were exempted from that kind of service and were paid from \$3.50 to \$10 a day, as I understand it, depending upon their capabilities and particular work to which they were assigned. In addition to that the contractors had a 7 per cent plus contract—

Secretary BAKER. Leaving the 7 per cent plus contract for a moment and dealing with this labor: From the beginning of the war until the end of it the question of the conscription of labor was a question that was constantly being raised.

Mr. FREAR. Even before the beginning of the war by certain insistent influences.

Secretary BAKER. It was constantly being raised, as to whether we ought to conscript labor and make the wage of the soldier the

wage of the laborer in important Government enterprises. That question was never positively decided. Nobody knows what would have happened if the war had gone on. The men who were exempted from military service in order that they might serve in places of production were in just the same situation as the men employed by the Emergency Fleet Corporation, the Government arsenals, or any other place where war supplies were being produced. Of course we did not draft the men who were working in the Government arsenals and pay them soldiers' wages instead of the wages of mechanics of their training and experience, nor did we do that in the Emergency Fleet Corporation. Whether it would have been a good policy to have drafted everybody in the country is a question of large policy about which, probably, this committee does not want now to express an opinion.

But in that particular instance those men were exempted because men who can get out lumber from a forest are not great in number. It is not a job that a man of my qualifications can undertake. It requires vigor to stand the northern winter in the woods. It requires very great strength in body. It requires very great strength of mind to endure the loneliness of life in the woods through long winter seasons.

Mr. FREAR. Why, there is no winter season up there compared to what we have in our northern country here.

Secretary BAKER. Probably not as severe.

Mr. FREAR. It is just a rainy season.

Secretary BAKER. Oh, no; it is cold up in the mountains; these people were getting spruce from a mountain country, much of it.

Mr. FREAR. Whereabouts?

Secretary BAKER. Along the lines of elevation that you just spoke of.

Mr. FREAR. Oh, no; they had to go 40 miles beyond that before they struck the spruce down on the lowlands.

Secretary BAKER. It may well be that the impression I had as to the extreme cold is erroneous, but it is certainly true that loggers are a peculiar class. They are skilled workmen in their class, and it requires men who can adjust themselves to those conditions. I was constantly told, and I have no doubt it is true that you can not take labor from Arkansas, Texas, and Virginia and put it up there in the woods and have it useful and efficient.

Now, those men wanted to go to war; that is the interesting part of it. They were not exempted out of any spirit of slacking. When Mr. Ryan went out there to look over these operations he telegraphed me this:

The greatest inspiration I can give to the men who are here working at this logging business would be a promise from you that if they work hard and get out the spruce you will permit the organization of a combat regiment out of these fellows to go to France and fight. May I make that promise in your name?

I sent him a telegram in reply, saying:

You may promise the men that a regiment will be formed just as soon as they can be spared from the production of spruce.

He had a perfectly mammoth meeting of them and told them that, and when he got back he told me that although he had heard many speeches he had never heard such uproarious applause or perfectly wild enthusiasm as greeted his announcement when he gave them that promise.

Mr. FREAR. What time was that?

Secretary BAKER. It must have been in May—no; it must have been later than that. Mr. Ryan went abroad with me in the early part of September, so this western trip must have been about in August.

Mr. FREAR. At that time there were nearly 2,000,000 Americans over in Europe—a million and a half of our soldiers? And the hardest fighting had been almost finished?

Secretary BAKER. Oh, no. Our Army of 2,000,000 men in France was just getting ready for the finishing blows of the war, but nobody knew that they would be the finishing blows. We were looking forward to fighting in 1919 and 1920.

Mr. FREAR. This began back in August, and I was wondering whether there was any likelihood of those men being sent over before 1919 or 1920.

Secretary BAKER. Of course they were intended to be sent over, and they expected to get into the fighting.

Mr. FREAR. But it would have been surely six months to a year before they could have qualified themselves and got into it?

Secretary BAKER. Probably.

Mr. FREAR. And by that time the war would have been over. The situation then is this. By placing these men upon the rolls, by giving them this amount of pay and by giving them the insurance, Disque was enabled to build up an organization which was maintained there to the end, of course?

Secretary BAKER. Yes, sir.

Mr. FREAR. I will read into the record this letter, which I think has a bearing on this particular matter.

JANUARY 3, 1919.

The PRESIDENT,

The White House, Washington, D. C.

MY DEAR SIR: You appointed Hon. Charles E. Hughes to investigate the Aircraft Production Service. In his report he recommends that an investigation of the conditions and work on the Pacific coast be had and carried on by a committee of the organization created to make this investigation. Instead of this being done, I am advised by the Secretary of War that he has designated some Army officer to make this investigation. This is very much like having a defendant to make an investigation as to his own delinquency. Without questioning the integrity or honesty of this official, it is certain that his report exonerating the service from blame will not be accepted as justifiable no matter how correct it may be.

The following is the statement contained in a letter to me from one of the most responsible citizens and lumbermen of our State:

"I see by the papers that the War Department has appointed some unknown major to investigate the spruce division here on the coast. It is needless to say that this will only be a whitewash, and it is not what the lumbermen here desire. They want, and court, an honest-to-God investigation that will show up the facts. They are not ashamed of their part in this program.

"I wish it were possible for you and Senator Poindexter to get such an investigation. This other will only be a whitewash. There are certainly some very grave charges against some of these cost-plus contractors; for instance, buying property, busting up the sale, and in a few days buying it over again at a bigger price, and other instances of the same nature.

"It is generally reported here that Siems-Carey expect to go permanently into the logging and lumber business on the peninsula, and they are just waiting to buy back material and construction the Government had paid for, at a sacrifice. In fact, the superintendent told the men to be ready to come back in a short time; that they were going to start up again.

"It is pretty hard for legitimate lumbermen to compete against work of this kind. No question but what the Chicago-Milwaukee Railroad is very much interested in starting these operations, as it would make business for their peninsula road. It is all

right for them or the Siems-Carey Co. to go into the lumber business if they choose, but I want to see them get in on the same basis the rest of us do, and as I understand John D. Ryan is heavily interested in the Chicago-Milwaukee, it naturally looks kind of queer to the rest of us.

"All we ask for is a square deal, but we feel that we are entitled to, and so is every loyal American citizen. Somebody should be brought to account for the extravagance that has been carried on in this division here on the coast.

"I think Gen. Disque is honest in his administration, but there is no question that he was not responsible for all these things. Deals were blocked out in Washington and sent here for him to administer. There is no question about that."

I think it indicates the general feeling of our people, and I believe that you should direct an investigation in the manner recommended by Mr. Hughes. The report of such a committee would be accepted no matter what it might be.

Very respectfully, yours,

WESLEY L. JONES.

Secretary BAKER. So far as that deals with any facts we have been discussing, it is important in two aspects. First, it shows that even a man who is doubtful in regard to some of these transactions regards Col. Disque as honest and efficient. The second point, which is important, it seems to me, is the suggestion that deals were made here in Washington to be carried out in Oregon, which we have shown not to be a fact. The Siems-Carey contract was negotiated by Col. Disque and brought here, and amended by Washington, but not originated here.

Mr. FREAR. Did Col. Disque come here, Mr. Secretary, to discuss the Siems-Carey-Kerbaugh contract?

Secretary BAKER. I can not answer whether he came only for that.

Mr. FREAR. But he came here and discussed that?

Secretary BAKER. Undoubtedly.

Mr. FREAR. And according to the statement of Lieut. Col. Hitchcock, made in the presence of other officers, as you suggested a while ago, he stated to various parties that Col. Disque was displeased with the terms of the contract which was entered into.

Secretary BAKER. You remember what was said?

Mr. FREAR. Yes; and I was going to ask, does Col. Disque in any way deny that statement as made by Lieut. Col. Hitchcock?

Secretary BAKER. The statement made by Hitchcock was this: Gen. Disque sent Hitchcock to attend a meeting of loggers, and they were complaining that they did not want the competition, as I understand from the evidence, of the Siems-Carey-Kerbaugh Co. They wanted to exclude competition from their fields, and Hitchcock said to them, "There are some features of that contract which the general did not want, but you and I and all of us are in the same position. It is a contract which the Government has made, and we have got to carry it out and live up to it." He did not specify what those things were, and as I understand the evidence Gen. Disque said there were some features of the contract which originally he had not approved but subsequently saw were wise.

Mr. FREAR. The important point in connection with this was that Hitchcock said that the contract was made in the East, or something to that effect.

Secretary BAKER. Made in the East, yes; that Gen. Disque was here when it was made.

Mr. FREAR. And that was true, was it not?

Secretary BAKER. Oh, yes; Mr. Stettinius made the contract.

Mr. FREAR. Well, now, Mr. Secretary, my attention has been called by Congressman Lea to a provision in this proposed United States Spruce Production Corporation statement that the bids may be withheld, and of course bids have been advertised throughout the country in regard to these various properties. I would like to ask if it is within your power—of course it is for you to decide—to withhold any sale until time has been given for an investigation by this committee—not to refuse the bids; I think that might necessarily involve additional advertising and all that and unnecessary delay—but to withhold the sale, as permitted under these bids, until we have had some chance to investigate conditions up there.

Secretary BAKER. I do not know what the provision in regard to the bids is.

Mr. FREAR. I think it is one that would really protect the Government in every way and at the same time permit delay in passing upon these bids until we have had some chance to ascertain all of the facts.

Mr. Lea calls attention to page 60 of the advertisement for sale of properties owned by the United States Spruce Production Corporation, where it says, under paragraph 6, "The seller reserves the right to reject any or all bids."

Secretary BAKER. But it does not say how long we will have to reject them?

Mr. FREAR. It does not say.

Secretary BAKER. Then, the law would be, if the bids appear on their surface to be good bids, that we would have a reasonable time to reject them under all the circumstances.

Mr. MAGEE. As I understand the reference to this railroad, this matter is being investigated?

Secretary BAKER. Oh, surely; and I want every bit of assistance I can get from you in the matter. A proper investigation will be made so far as my facilities go, but I want assistance from you.

Mr. MAGEE. They refer to other properties?

Secretary BAKER. Outside of the railroad? The railroad and cut-up plants.

Mr. FREAR. They refer briefly to this railroad and then a short railroad which runs north from the interior to Uquina Bay, in Oregon. That is a very short road. Then, there is a short road which runs from the opposite side of Uquina Bay down near the Blodgett tract of timber bought by Col. Disque. That is a road of 25 miles, as I now remember. Then, there is a cut-up plant at Vancouver, opposite Portland.

Secretary BAKER. Yes; I have seen that.

Mr. FREAR. And then there is the cut-up plant that has been built down at Toledo, and that is offered for sale, either with or without—separate from those two roads down there. In addition to that, there is the Blodgett tract of timber, and possibly some other properties.

Secretary BAKER. Let me be clear about that. Have you any indication of any kind with regard to any of these properties except the Milwaukee?

Mr. FREAR. I will say to you, Mr. Secretary, that I have in my possession a large amount of correspondence relating to the Warren Spruce Co., that built the road—I am not sure whether it is the Toledo road in Oregon—which correspondence indicates that parties who were desirous of building that road were prevented from doing

so by Col. Disque, whether justified or not, and the contract was given over to the Warren Spruce Co.

Secretary BAKER. That just leads to the suggestion that perhaps the Warren Spruce Co. will bid for the road which they built.

Mr. FREAR. It does not have anything to say about that, because this was prepared by other parties some time ago, and contains the correspondence.

Secretary BAKER. I hope you will not mind my being as explicit as I can. I do not want any action I may take from now on to be at variance with any understanding I may have with the committee. Here are a number of properties which are to be advertised for sale. The bids are to be received on the 2d of September. The committee suggests the advisability of my holding up any bids which are received, so as to take advantage of any inquiry the committee may make, in addition to any inquiry I may make. I am entirely in sympathy with that. Now, does the committee desire me to hold up bids on all the properties of all kinds advertised for sale or only specific properties, and if specific properties, which ones?

Mr. FREAR. Of course, we are in this position, Mr. Secretary: We are in the dark as to how far these complaints go and what merit they may contain. My suggestion is that by the middle of September at any rate we ought to be able to complete the hearings, so as to give us a definite idea of conditions, so that we could then communicate with you by wire as to any particular conditions as to any particular properties.

Secretary BAKER. All right. Then, I can not only assist you, but you will let me have any evidence you get of any situation——

Mr. FREAR. Certainly.

Mr. MAGEE. If we leave by August 10 it seems to me we ought to take this evidence and get the facts probably before the middle of September.

Secretary BAKER. You may have some difficulty, growing out of what Mr. Frear suggested a moment ago. A lot of these people have scattered. There is Maj. Morley, for instance. I hope the committee will keep that matter in mind, because he is a very important person and was undoubtedly the chief legal reliance of Gen. Disque. He is in Cleveland—John E. Morley. I think it would help you to get him before you go west, as a matter of fact.

Mr. FREAR. There is one matter further, and I hope we can get through with this without recalling you. This is with reference to the contract for the sale of the Curtiss planes, and I was going to as in that connection whether or not the contract was in such shape that it would be possible to withdraw the sale so far as it is not completed, provided it should occur to you that there was sufficient ground for doing so.

Secretary BAKER. I do not know that, sir; I have not seen that contract recently.

Mr. FREAR. Then I will ask a few questions. The contract has been submitted. You remember, of course?

Secretary BAKER. Oh, yes.

Mr. FREAR. And of course it had your approval. Now then, one of the questions is: How were the terms arrived at, if you know?

Secretary BAKER. I can not answer that very definitely. They were worked out by the Aircraft Division and the director of sales together, both operating, I think.

Mr. FREAR. They made no inventory of the planes that were to be taken over, as I understand?

Secretary BAKER. I can not answer that.

Mr. FREAR. No inventory has been made up to the present time, as I understand?

Secretary BAKER. I can not answer that.

Mr. FREAR. Would it not seem advisable to have an inventory of the planes that were turned over and to know all the facts in the case before a contract would be completed, and, if the power exists, to withdraw the planes from sale providing it is for the best interests of the Government?

Secretary BAKER. I feel very sure, Mr. Frear, I would be unjust to the contractor and unjust to the committee if I undertook to discuss the details of that contract, because those who know about it would be able to answer so much better. Gen. Menoher would know about it, and Mr. Hare would know about it.

Mr. FREAR. Then comes the question of how they would dispose of these airplanes if they should not be sold to the Curtiss Co. What is the particular object of disposing of them to the Curtiss Co.?

Secretary BAKER. The particular object as represented to me was that the planes were obsolescent. They were not needed for aircraft purposes in the Army. The Army could not guarantee the planes, they were in all stages of repair, it was quite impossible for the War Department to sell those planes to individuals and allow them to take the risk of going up in dangerous planes and meeting with fatal accidents by reason of the lack of repairs to the planes, and turning them back to the Curtiss Co. seemed to be the wise way to dispose of them.

Mr. FREAR. I may be wrongly informed with regard to that, but I understood that about 85 per cent of those planes were practically new.

Secretary BAKER. I do not know that.

Mr. FREAR. I think the percentage was very large, so large that I was very much surprised at it.

Secretary BAKER. They are in all stages, as I understand it.

Mr. FREAR. It is true, is it not, that several hundred requests have come in to the Aircraft Service for an opportunity to purchase these planes from people who are flyers and from various other individuals, and that up to this time they have been prevented from purchasing them?

Secretary BAKER. They are prevented from purchasing those planes, but there are other planes, because I had a conference with the director of sales, in which we fixed the price for the private sale of planes.

Mr. FREAR. What kind of planes were those?

Secretary BAKER. As I understand, the same kind.

Mr. FREAR. And these identical planes, I understand, were sold to the Curtiss Co. at an average price?

And with the engines they are offering them for resale at all the way from \$3,000 to \$5,000 apiece?

Secretary BAKER. I have had that question presented to me. I think one of the Senators asked me about it the other day, and told me that a lieutenant of his acquaintance had applied for a plane and had been told he could not get it anywhere but from the Curtiss Co. I asked the director of sales about that, and he said no, and recalled to my recollection that I had fixed a price of \$400 on sales to private individuals. The reason it was fixed at \$400 was this: Mr. Hare came to me and said they had planes which private individuals might buy, and asked me if I would not fix a price on them. I said, "Let us fix the same price as to the Curtiss Co." He said that that would not be fair, because the Curtiss Co. had bought planes of all degrees of decrepitude and age, and the planes we were going to sell to these private individuals were equal to the best we sold to the Curtiss Co., and he recommended that the price be fixed at \$400 for the private sale of these selected planes. I agreed to that, and said I thought that was right under the circumstances.

Mr. FREAR. But here were planes sold by the Government to the Curtiss Co., as I understand, of which substantially 85 per cent were new planes, planes that had not been used but had been tested, and were as valuable as when originally made, and now the Curtiss Co.'s price on those planes, to be delivered from various United States flying fields throughout the country, where they have been sold by the Government to the Curtiss Co., run as follows: JN-4D, new, \$5,000; JN-4D, JN-4A, JN-4B, Canadian, and Standard J-1, from \$2,000 to \$2,000.

Secretary BAKER. That is, with the engine and equipment to run. It would look as if the price had gone up very much, but of course they are selling the very best of the planes, of which they bought a very large number at an average price. Of course there are not enough people in the United States who could fly to buy all of them.

Mr. FREAR. They give the price of the OX-5, new, at \$2,500, and they advertise to deliver that from the various United States flying fields throughout the country. Do you remember what the figure is there for the motor?

Secretary BAKER. No; I do not.

Mr. FREAR. Now, there has been a proposition urged very strenuously, has there not, to equip the National Guard of the country with squadrons of planes, that is, in the entirety?

Secretary BAKER. I have heard the suggestion.

Mr. FREAR. Do you know whether that is likely to materialize at all?

Secretary BAKER. I do not know that.

Mr. FREAR. I was wondering, if that could be done, whether it would not be advisable, provided we are able to withhold part of this contract with the Curtiss Co. to withdraw some of those planes.

Secretary BAKER. It might be; that would be an appropriate question to ask Gen. Menoher. As far as I am concerned, I will never approve any plan to give planes to the National Guard unless we give them the very best, and to turn over to them surplus planes, because we do not happen to need them would seem to me to be a mistaken policy.

Mr. FREAR. But where we have 85 per cent of new planes, if that be true, it would seem that the other 15 per cent could be easily repaired?

Secretary BAKER. And yet the important question is not with regard to those planes at the outside, but whether the Government has not other planes that would be better for the National Guard.

Mr. FREAR. Gen. Menoher would be the one to inquire of as to that?

Secretary BAKER. Yes.

Mr. LEA. There are quite a number of things that I have been interested in that I wanted to ask for information on, but I believe that by the time we have examined the other witnesses they will be largely cleared up, so I feel it will not be necessary for me to ask the Secretary to come back on account of the questions I want to ask.

Mr. FREAR. At this point, in case we may want to refer to it at any time, I will ask to have printed in the record the memorandum from Mr. Hare to the Assistant Secretary of War, dated May 19, 1919.

(The memorandum referred to is here printed in full as follows:)

WAR DEPARTMENT,
Washington, D. C., May 19, 1919.

Memorandum for the Assistant Secretary of War.

The Curtiss Aeroplane & Motor Corporation have, as you know, made an offer to purchase 4,608 Curtiss OX-5 motors, 1,616 JN-4 Curtiss type aeroplanes without motors and 1,100 standard JN-1 aeroplanes without motors, which have been declared surplus by the Air Service, for the sum of \$2,720,000. This material cost the Government approximately \$20,000,000.

As the price the Government was to receive for this equipment was so small I addressed a letter under date of March 20, copy of which is attached hereto and marked "Exhibit A," to Gen. Menoher, Chief of Air Service, and received in reply a letter from him under date of March 24, copy of which is attached hereto and marked "Exhibit B," in which he makes the statement under paragraph 19 thereof:

"The JN-4 planes proposed to be sold are not new, are either obsolete or obsolescent type. The standard J-1 planes are obsolete. There are no new planes and but 212 new motors in the lot proposed to be sold. No comparison with \$5,000 catalogue price of Curtiss plane is possible."

When the contract, as prepared by the Curtiss Aeroplane & Motor Corporation in conjunction with officers of the Air Service, was submitted to this office, it was found to contain an exclusive option clause giving the Curtiss Co. the right to purchase at any time within the next two years any additional planes that might be declared surplus by the Army at the average price agreed upon under the proposed contract.

Our legal advisers told me that we could not properly accept such an exclusive option clause, and I therefore sent for Mr. Keyes, vice president of the Curtiss Co., and told him that while we would be perfectly willing to offer first to the Curtiss Co. any planes that might during the next two years be declared surplus that if they declined to buy them at a fair market price the Government must retain the right to dispose of them in some other way.

Mr. Keyes informed me that they would have to be given some definite assurance that they could control the market for any additional surplus Curtiss planes, as that was one of their principal reasons for entering into the contract. He further stated that he had just discovered that certain of the planes which he had contracted for purchasing under the proposed contract had been damaged at some of the bases and that therefore he desired a careful inventory taken before negotiations were proceeded with.

We then made arrangements to have a representative of the Curtiss Co. and a representative of the Air Service visit the various bases and pick out the planes which it was proposed that the Government should sell to the Curtiss Co.

In the meantime a new contract was prepared which gave the Curtiss Co. the right to terminate the contract immediately upon the declaration of any such surplus planes by the War Department during the period of the contract and gave the Government the right to terminate the contract at the expiration of one year after the declaration of such surplus, provided that within that period the Curtiss Co. had not agreed to purchase the additional planes at a fair market price. The Curtiss Co. of course, to pay for all planes delivered up to the time of the cancellation of the contract.

The purpose of this clause in the contract was in effect to give both the Curtiss Co. and the Government an opportunity to discuss the terms of a further sale of surplus when such an occasion might arise. If no proper agreement could be reached with the Curtiss Co. it enabled the Government to dispose of this surplus in some other direction.

The inventory of the planes to be taken by the Curtiss Co. under the contract has just been completed, but unfortunately this record is in no shape to adequately determine the actual condition of the planes to be sold. A certain number of new planes are designated and a certain number of secondhand planes are designated, but we have no means of knowing whether or not many of these so-called secondhand planes have been flown for more than an hour or two. A proportion of them may be, to all intents and purposes, practically new, and immediate arrangements have been made to have a more accurate estimate of their condition arrived at.

The fact that new planes are to be included in the contract for sale is contrary to the understanding had with Gen. Menoher when the original contract was under discussion, as you will note in paragraph 19 of his letter of March 24 he states, "There are no new planes."

The Curtiss Co., however, stated that it had always been their understanding that they were to secure under the contract a certain proportion of new planes.

Another complication, however, has arisen due to the fact that it seems highly probable that Congress will pass the necessary legislation to have the War Department supply, in so far as it can from surplus stock, the requirements of the Militia Bureau for aeroplanes of various types and I have therefore addressed to-day a letter to Gen. Menoher copy of which is attached hereto and marked Exhibit "C," and am addressing this memorandum to you with the thought in mind that you may desire to take this entire question up with the Secretary of War in order that he may discuss it with members of the Military Affairs Committee of the House and Senate.

While it is true that a careful study of the entire situation has been made in so far as developing markets for these surplus planes and no one has come forward and offered as good a price for all of these planes as has the Curtiss Co., it is still of course obvious that the price offered by the Curtiss Co. is exceedingly low and if it is thought that within a reasonable period of time the Militia Bureau will be in the market for similar training planes it might be well for the War Department to hold these planes in stock until the requirements of the Militia Bureau are known.

On the other hand it must not be lost sight of that the aeroplane industry is in its infancy and will require the support of the Government if it is to thrive. The Curtiss Co. have, from the nature of their contracts with the Government, been unable to manufacture any aeroplanes to sell on their own account and I learn from Mr. Keyes that one of the principal reasons for securing these planes from the Government at this time is to enable the Curtiss Co. to compete with aeroplanes of foreign manufacture at present being sold in China, South America, and elsewhere. If the Curtiss Co. is not put in a position to meet this competition promptly at this time it is feared that this market will be temporarily, at least, lost to American trade.

You will see from the above that the entire question is quite an involved one and involving as it does other policies than those directly connected with the office of the director of sales I feel that this entire question should be brought to the attention of the Secretary of War for such action as he may deem advisable under the circumstances. May I suggest that a prompt decision be reached in view of the fact that Mr. Keyes is planning to sail for Europe on May 24.

C. W. HARE,
Assistant Director of Munitions.

(Thereupon, at 12.45 o'clock p. m., the subcommittee adjourned to meet to-morrow, Saturday, August 2, 1919, at 10 o'clock a. m.)

SUBCOMMITTEE NO. 1 (AVIATION) OF THE
SELECT COMMITTEE ON
EXPENDITURES IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Saturday, August 2, 1919.

The subcommittee met at 10 o'clock a. m., Hon. James A. Frear (chairman) presiding.

STATEMENT OF HON. FIORELLO H. LaGUARDIA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK.

(The witness was duly sworn by the chairman.)

Mr. FREAR. Major, you are a Congressman from the State of New York?

Mr. LaGUARDIA. Yes, sir.

Mr. FREAR. Elected for the first time for what Congress?

Mr. LaGUARDIA. For the Sixty-fifth Congress.

Mr. FREAR. You have been a Member of the House of Representatives in the Sixty-fifth and the Sixty-sixth Congresses?

Mr. LaGUARDIA. Yes.

Mr. FREAR. From which district?

Mr. LaGUARDIA. The fourteenth New York.

Mr. FREAR. New York City?

Mr. LaGUARDIA. In New York City.

Mr. FREAR. When war was declared you were a Member of the House of Representatives and offered your services to the Government?

Mr. LaGUARDIA. Yes; and I was commissioned a first lieutenant in August, 1917.

Mr. FREAR. Were you assigned to any particular branch of the service?

Mr. LaGUARDIA. In the Air Service.

Mr. FREAR. At the outset?

Mr. LaGUARDIA. Yes, sir.

Mr. FREAR. Will you please explain to the subcommittee briefly, in your own way, your experience, what you did from that date, so far as it relates to military matters, up to the time of your leaving the service?

Mr. LaGUARDIA. Shortly after being commissioned I was given overseas orders and was second in command of a detachment of 150 aviation students who were ordered to sail and repair to Italy to receive flying instruction. We arrived on the 1st of October in England.

Mr. FREAR. That was 1917?

Mr. LA GUARDIA. That was 1917. Owing to a mix-up in orders the detachment was ordered to remain in England, and the officers to proceed to Paris for instructions.

That detachment remained in England for a long time and received their complete course there, and most of the boys—

Mr. FREAR (interposing). Were you with the detachment?

Mr. LA GUARDIA. No; I was not. The most of the boys were assigned to English squadrons and rendered excellent service. It was a picked detachment and they were very splendid men.

Mr. FREAR. Let me interject right there, in order to make it clear. How many were in this detachment?

Mr. LA GUARDIA. One hundred and fifty.

Mr. FREAR. They were men, and were not officers?

Mr. LA GUARDIA. They were cadets. They had received their ground training here. I remained in Paris a few days. Col. Bolling was then in command.

Mr. FREAR. In command of what?

Mr. LA GUARDIA. Of the Air Service in Paris. I believe Gen. Kenly was there, too. Then I was ordered to proceed to Foggia, Italy, and I took down the detachment of 80 or 90 aviation students. I received my preliminary instructions in flying in Foggia, which later became the eighth aviation instruction center, A. E. F., and I qualified there for my R. M. A.

Mr. FREAR. What is that?

Mr. LA GUARDIA. Reserve military aviator.

Mr. FREAR. How long a period of instruction did you have there in the field in Italy?

Mr. LA GUARDIA. We could turn the boys out in about three or four months, but we were short on material, and we extended the course a little longer because there was no place to send these men if we rushed them through too quickly.

Mr. FREAR. About how many hours of flying did they have, or what was their method of determining when they were qualified?

Mr. LA GUARDIA. Our instructors were officers of the Italian Army, and our course of instruction was the same as that outlined for the Italian Army, with this exception, that our boys would qualify for their solo flying—that is, when a man takes a machine up the first time alone—in about one-half the time of the Italians.

Mr. FREAR. That is, the Americans?

Mr. LA GUARDIA. The Americans, yes.

Mr. FREAR. Was that the plan in this country?

Mr. LA GUARDIA. No; that was really the individual attitude and ability of the student. The instructors were surprised at the way the American boys took to it. They had more confidence. We then cut down the time of military training.

Mr. FREAR. About how many men, generally speaking, were there at the Italian training camp; that is, how many Americans?

Mr. LA GUARDIA. They trained for us about 650.

Mr. FREAR. There were 650 American students there?

Mr. LA GUARDIA. Yes; when I was there. Maj. Ryan was in command at the camp Sud, and then they opened camp Ovest, and I was in command of that camp.

Mr. FREAR. At that time you were promoted to the grade of major?

Mr. LA GUARDIA. I was a captain. The details of the school are not especially interesting to this committee, but as a matter of interest I would like to say this: We went down there, and there was no provision made for feeding these cadets. A young officer who was sent down ahead of us came back and arranged that they would do the feeding with the Italian soldiers. That sounds and looks all right on paper, but you could not put boys like those we had in the Aviation Service, 90 per cent of whom were college graduates, on Italian food. They get one ration a day.

Mr. FREAR. That is, the Italian soldiers?

Mr. LA GUARDIA. The Italian soldiers. So we arranged to get a contractor to give them food, as far as the conditions of the country permitted. We were generally scarce on beef and things like that. Then I got into trouble as to how we were going to pay the contractor. Every time we did anything like that it would be O. K'd all the way through until it came to our headquarters at Tours, where we had an Infantry colonel or a Cavalry colonel to pass on it, and the only argument he had before him was the Army Regulations, and they would not permit us to pay the contractor. So we had to get away from that. We did it in this way: We got the Italian Government to pay the contractor, and then the Italian Government billed us for feeding troops, and in that way we fed our men.

Mr. FREAR. Were our cadets training with Italian cadets or Italian students?

Mr. LA GUARDIA. No; we were training alone.

Mr. FREAR. We had our own separate camp?

Mr. LA GUARDIA. Yes.

Mr. MAGEE. In Italy?

Mr. LA GUARDIA. Yes; everything was separate except the instruction.

Mr. FREAR. Did the Italian Government have camps near by where they were training their men?

Mr. LA GUARDIA. They had one camp where they were training their own men. Those boys who were assigned to bombing work went to Malpensa, near Milano, and there we received our bombing training. We were trained together with the Italians. There were Italian boys there and English boys, and after I had finished my course I think there were some Japanese there, too.

Mr. FREAR. Is there any matter of interest to the committee in regard to the difference in the system of training of the Italians and the Americans?

Mr. LA GUARDIA. Not except this: I think—and I do not say this in a spirit of criticism—I believe the Italians were perhaps more careful and did not take into consideration that we were at war and that men were bound to be killed, even in training.

Mr. FREAR. They were very careful?

Mr. LA GUARDIA. They were very careful with their students.

Mr. FREAR. The reason I ask these questions is that the committee may have an understanding of the full scope of flying activities if the committee should desire to make any recommendations.

Mr. LA GUARDIA. The Italians would keep their students on dual control longer than we would.

Mr. FREAR. You mean two men flying?

Mr. LA GUARDIA. Two men flying together, yes; and they were very cautious before they turned their men loose. We had confidence in our boys, and when we saw they could run a machine and land all right we turned them loose.

Mr. FREAR. Did that result in many accidents?

Mr. LA GUARDIA. Of course, if that is watched properly and the commanding officer is on the job and cooperates with and advises with the medical officer it is all right. But if there is any feeling between the medical side and the commanding officer or the instruction side and the commanding officer, it is very dangerous. Out of 650 men that were trained there—

Mr. FREAR (interposing). Americans?

Mr. LA GUARDIA. Americans, yes; we only lost 11. Out of those 11, 3 casualties which we had were not the fault of the training, but they were men who were expert flyers of our own who collided in the air. So we really lost only eight. But we had a man, Dr. Kiel, of Texas, who really made a study of aviation, and Maj. Ryan was an excellent man, and we raised some of our own men there so that we kept constant watch on these boys. We would often check up on their conversation in the barracks as to flying, to see if the men displayed any timidity or anything of that sort in connection with flying, and we would eliminate a man if we observed that his movements in the air were over-cautious or uncertain or unintelligent. One of the best motor experts we had there was a man of the dare-devil type, who had been an automobile racer, but we had to take him off of flying because he had no judgment of distance. But he rendered very valuable service on the motor side of the service.

Mr. FREAR. Will you state briefly the different titles given to men flying in machines, so the committee will know?

Mr. LA GUARDIA. We first have the aviation student or cadet. As soon as he graduated he received his officer's brevet, his wings, and he became a first lieutenant.

By the way, I would ask the committee to look into the method employed, where a lot of boys were really not treated fairly, where they were promised first lieutenantcies but got second lieutenantcies. Then he became a lieutenant and a flyer, and that was all the title he had. He was an R. M. A.

Mr. FREAR. The men who go up in the machines themselves, fly the machines, have titles; there is a pilot?

Mr. LA GUARDIA. There is a pilot and an observer.

Mr. FREAR. What are the duties of each?

Mr. LA GUARDIA. The pilot drives the machine. In pursuit work he fights.

Mr. FREAR. He handles the gun?

Mr. LA GUARDIA. He handles the gun. In a single fighter he is the only man there, and he flies and fights. Then we have the two-seated fighters, where the observer also fights.

Mr. FREAR. He sits in the rear?

Mr. LA GUARDIA. He sits in the rear or the front, according to the type of machine. Then we have the observation machine, where the pilot flies and the observer takes observations, photographs, and handles the wireless, and things like that, and in those machines they generally have a gun for each of them for protection. Then the same type of machine is used for the direction of artillery fire. The

men who go out in those machines are especially trained people who go out and direct the fire of the artillery by a system of signals and wireless communication.

Then we have the bombing fliers. They have the day bombers and the night bombers. If there are two men in the bomber, one flies and the other drops the bombs. Take the machines we used, the front man was the observer and had a machine gun for defense, and the rear man had a rear machine gun mounted on a turret, and he attended to the motors and also to the machine gun in the rear.

Mr. FREAR. You have made it reasonably clear, and yet possibly you can amplify it and give the committee a little further information on the different duties of the various flyers in the different machines. For illustration, will you distinguish for us the difference between the bombers; that is, the day bomber and the night bomber, the pursuit plane, the fighting machine, and the advance training plane, and the elementary training plane, briefly. I have a fair understanding myself, but I would like to have your explanation of them.

Mr. LA GUARDIA. When a man first learns to fly he is put on a training machine, which is generally a slow machine, not high speed, an under-powered machine, so that he is not being motored through the air, but is actually flying through the air. That is the training machine.

Mr. FREAR. Elementary training?

Mr. LA GUARDIA. Elementary training. In this country they had the Curtiss machine, which is an excellent machine for the purpose. We used the Farman H. That was a pusher.

Mr. FREAR. What horsepower?

Mr. LA GUARDIA. That was 90-horsepower. We have a very good motor in this country, the O X 5, which is an excellent motor for that purpose.

Mr. FREAR. That is put in the elementary training planes?

Mr. LA GUARDIA. Yes. We had the Fiat 90-horsepower motor.

Mr. FREAR. In Italy?

Mr. LA GUARDIA. In Italy.

Mr. FREAR. In what kind of a machine?

Mr. LA GUARDIA. In the Farman H.

Mr. FREAR. That is an Italian machine?

Mr. LA GUARDIA. That is a French machine. After the student is put on solo flying and he graduates from the elementary stage, after making certain duration and altitude tests he is put on advanced flying. If he is to become a pursuit pilot he is sent to an advanced school, where he takes a small, high-powered machine like to Spad.

Mr. FREAR. That is a French machine?

Mr. LA GUARDIA. Yes; or he takes the Sopwith fighter, and he is put through what they call a school of acrobatics. There is where he learns his stunts.

Mr. FREAR. With that machine?

Mr. LA GUARDIA. With that machine. These stunts are absolutely necessary. That is the way he learns to get out of range and also the way he learns how to acquire an advantageous position over the enemy. He is put through that.

The advanced training is risky. You can not tell whether a man is able to do it until he tries it, and the only way to try it is to let

him go up in the air, and so the casualties in that training in time of war were naturally high.

Mr. FREAR. What were the advanced training machines used in Italy and France?

Mr. LA GUARDIA. In Italy they used the S. I. A. and the S. V. A. and the Henriot and the Spad.

Mr. FREAR. For advanced training?

Mr. LA GUARDIA. For advanced training; yes. None of my men received this advanced training in Italy, and but a very few on the S. I. A. We would send them to France for advanced training; that is, all of them except the bombers.

Mr. FREAR. What is the meaning of the letters S. I. A.? Have they any particular meaning?

Mr. LA GUARDIA. S. I. A. means Societa Italia Automobile.

Mr. FREAR. The reason for asking that is that these letters have some significance, but they are used for identification purposes?

Mr. LA GUARDIA. Yes. The letters S. V. A. also represent the name of a society. They represent the names of two associations.

The observer is taken up in a machine and he is trained to read the maps and to work the wireless and he is also trained how to take photographs. The bomber is trained differently.

After the men finish flying the elementary machines then they are trained to fly the big fellows like the Handley-Paige and the Caproni. They are taught how to bomb.

Mr. FREAR. About what is the horsepower of an advanced training machine?

Mr. LA GUARDIA. You mean for bombing?

Mr. FREAR. No, I mean the advanced training machine. What is the engine power?

Mr. LA GUARDIA. One hundred and eighty.

Mr. FREAR. And in the case of the bomber, about what?

Mr. LA GUARDIA. About 450. I always used a 450-horsepower machine.

Mr. FREAR. That is with the Caproni?

Mr. LA GUARDIA. Yes.

Mr. FREAR. What engine was that?

Mr. LA GUARDIA. I had a Issota Frachini.

Mr. FREAR. That was manufactured in Italy?

Mr. LA GUARDIA. Yes.

Mr. FREAR. Was that a hand-made engine, or a machine-made engine?

Mr. LA GUARDIA. They were all mostly made by hand. In flying over the mountains, where you want high power, they have a 600-horsepower engine.

Mr. FREAR. Did not some of these machines have 300-horsepower engines?

Mr. LA GUARDIA. I did not fly those at the front. There was a little trouble with the carburetor, owing to bad politics in Italy and that delayed production on the front. The machine has splendid flying qualities.

Mr. FREAR. In the preparation of their aviation program in Italy did they take to it very readily, very promptly, or was there delays in production, or great delays in preparation?

Mr. LA GUARDIA. In Italy?

Mr. FREAR. Yes, as far as you learned.

Mr. LA GUARDIA. Italy suffered a great deal of the same sort of thing we suffered in this country. They had the mechanical and inventive genius. Their S. V. A. machine, during the war, I will say, without any fear of contradiction, was the most perfect flying machine in the world under 12,000 feet, with the motor they had. The Fiat people are very influential, politically.

Mr. FREAR. Is that the Italian machine?

Mr. LA GUARDIA. Yes.

Mr. FREAR. What kind of a machine is that?

Mr. LA GUARDIA. They build the S. I. A., and I had trouble with—

Mr. FREAR (interposing). I mean is it a fighter?

Mr. LA GUARDIA. No. The Fiat people are big automobile builders; they have a big automobile factory and they turned out motors mostly, but they got it into their heads that they wanted to turn out a flying machine.

Mr. FREAR. That goes into what kind of a machine?

Mr. LA GUARDIA. It went into a high powered observation machine, but could be used as a fighter, the S. V. A. Their army regulations are about as complicated and stupid as ours, and I would not have been up against that proposition. If they had the material, if we had made good our promises to them to furnish material, they could have given us a sufficient number of Caproni's planes in the middle of 1918 so that we could have bombed Berlin with perfect confidence and ease. But they were up against it in the matter of material. I have seen the Caproni factory stopped for want of coal. I have seen them altogether stopped because they did not have cables.

Mr. FREAR. Cables for the machines?

Mr. LA GUARDIA. Cables for the machines. At one time we had no steel there.

Mr. FREAR. I wish you would explain briefly what did occur, because Gen. Mitchell, who had charge of the air force over there, said in my office that it was a very important and a very valuable arrangement which was made, as I understand it, by you.

Mr. LA GUARDIA. Suppose I take that up later. I think it would be better to have somebody else tell you about that.

Mr. FREAR. I will be very glad to have you pursue your own course.

Mr. LA GUARDIA. Let us come now to the material. I need not point out here that the flying personnel of our air service is, I will say equal to any in the world. These boys did wonders in the way they took to flying and the way they put up with conditions, and the way they were turned out as expert flyers. We can say now we were away ahead in flying men, even if we were way behind in production. The American flier is the best in the world, if I may be pardoned for saying that. Let us come now to the material.

Mr. MAGEE. What about the suggestion which has been made that the Committee on Military Affairs did not appropriate money enough to provide sufficiently for the Air Service?

Mr. LA GUARDIA. Anybody who made that statement is either stupid or knows nothing about aviation, or else made a cheap statement for political purposes.

Mr. MAGEE. You read the statement, did you not?

Mr. LA GUARDIA. I read the statement and I answered it on the floor of the House. We provided enough money for aviation this year; in fact, they can not possibly spend all we have appropriated, unless it is wasted.

Mr. FREAR. You mean in the present appropriation?

Mr. LA GUARDIA. For 1920. Of course, if they want to continue to buy swamp lands, or to improve lands——

Mr. FREAR (interposing). Or buy flying fields?

Mr. LA GUARDIA. Yes; anything of that sort, or to build buildings and abandon them. If they want to do things like that you can provide as many \$640,000,000 appropriations as you want to, and you will never have an air service.

Mr. MAGEE. The Committee on Military Affairs made special appropriations to keep the Air Service on a growing, efficient basis.

Mr. LA GUARDIA. Yes.

Mr. FREAR. That is the Committee on Military Affairs?

Mr. LA GUARDIA. Yes. The trouble, I will say, is this: They want a dirigible machine. We have not got plans and specifications to build a dirigible, and that can not possibly be built during the present fiscal year. They want to build planes. They do not know what they want to buy. They have sufficient money to buy all the planes they can use, and to get what they want for use for experimental purposes on motors, everything they need for 1920, and I assure you if it is done wisely and honestly they will have a surplus, but if they want to continue at the rate they have been going heretofore and buy land here and there, and put up buildings, and send commissions around the world, then you can not appropriate enough money for them to do that.

Mr. FREAR. Your judgment is, based upon your own experience, and also your experience as a member of the Committee on Military Affairs of the House——

Mr. LA GUARDIA (interposing). And actual knowledge of aviation conditions.

Mr. FREAR. You were describing these different machines.

Mr. LA GUARDIA. We have the fighting machines, the pursuit machine.

Mr. FREAR. That is capable of going how many miles?

Mr. LA GUARDIA. About two hours. It has about a two hours' range when used that way.

Mr. FREAR. And about what speed?

Mr. LA GUARDIA. On an average of 120 to 125 miles. You will read about some of them going 138 miles, but that is theoretical. The duty of that sort of machine is very much like the duty of a cruiser on the water. It is an advance guard. It protects the observation plane from the attacks of the enemy while the observation plane is taking photographs or making observations. It goes out to destroy the enemy's air fleet. They are a high powered speedy fighting machine.

Mr. FREAR. One gun or more?

Mr. LA GUARDIA. The Germans had some with two guns in them, but usually one gun. Then the observation machine is a heavier machine and slower in speed. I have described the duties of the observation plane. It takes care of itself, but if it has very important

work to do the pursuit planes are in the air ahead of it to clear the way.

The day bomber is faster than the night bomber because it does its work in the daytime. It naturally can not carry as many bombs as the night bomber for that reason. It goes out and bombs ammunition dumps or railway stations or things of that sort in the daytime. It can go out alone, in squadron formation, but generally the pursuit planes are ahead of it in the air. The night bomber does its work in the nighttime. In the night bombers we do not go out in formation. We would start, for instance, to go over the mountains, about three minutes apart. When we would go over the Piave we would go one minute apart.

Mr. FREAR. What length of time can they remain in the air with their fuel?

Mr. LA GUARDIA. Four hours.

Mr. FREAR. They can remain in the air 4 hours?

Mr. LA GUARDIA. Yes; 4 hours, and the Caproni could remain 6 hours; they have been up 7 or 8 hours.

Mr. FREAR. That is under less power?

Mr. LA GUARDIA. No; the machine is so much larger that you carry more fuel. Our work was, of course, the bombing of important military works. We never bombed a city.

Mr. FREAR. Those were the instructions?

Mr. LA GUARDIA. Those were the instructions at the front where I was stationed. Then if we got into trouble in the enemy's country our instructions were to come home with our bombs, for fear of indiscriminately dropping bombs.

Mr. FREAR. That was true of the Italian maneuvers as well?

Mr. LA GUARDIA. Those were the Italian orders. We were working under Italian orders.

Mr. FREAR. Was that true of the French and the English?

Mr. LA GUARDIA. I dare say it was. We got over in 1917, and we did not have anything.

Mr. MAGEE. In Italy?

Mr. LA GUARDIA. In France and Italy. We had nothing—no machines—nothing.

Mr. FREAR. No training machines?

Mr. LA GUARDIA. Not a thing.

Mr. FREAR. That was at what time?

Mr. LA GUARDIA. I landed there on the 1st of October, 1917.

Mr. MAGEE. You mean, I suppose, you had nothing of American manufacture?

Mr. LA GUARDIA. I mean we had nothing of any kind when we first got there. We then started to make arrangements with the French and Italians and the British, and they gave us machines and gave us training sections. I made the contract with the Italians for that.

Mr. MAGEE. What date was that?

Mr. LA GUARDIA. That was October, 1917. I took over the first detachment, and that remained in England. I went over with the first detachment into Italy. About that time we started to create our own training centers in France, and did train in France, in England, and in Italy, and that training was carried out by the use of planes from those countries.

Mr. FREAR. They furnished them to us?

Mr. LA GUARDIA. They furnished them to us.

Mr. FREAR. Did we buy them, or what arrangement was made, if you know?

Mr. LA GUARDIA. In England and Italy they furnished the machines and we paid for the use of them by our men. I arranged the contracts for that.

Mr. FREAR. That is, for the use of them?

Mr. LA GUARDIA. For the training and for the use of them.

Mr. MAGEE. It was really a rental of them?

Mr. LA GUARDIA. It was really a training contract first.

Mr. MAGEE. I was referring to the ownership.

Mr. LA GUARDIA. In France, I think we bought the training machines, because we had mostly advanced training, which we conducted ourselves. I am quite sure we bought those machines. The one hope of the Air Service and the one hope of the world in 1917 was the Liberty motor. We heard so much about it, and so much was promised, that we put up with everything because this thing was coming out, and it was going to solve the problem.

Mr. FREAR. That was the sentiment of your people over there?

Mr. LA GUARDIA. That was the sentiment of the whole front—the French, the English, and the Italians, as well as ourselves.

Mr. FREAR. Were you given to understand when that was to be?

Mr. LA GUARDIA. Yes; I am coming to that. By the time I sailed in September the statement had already been made that this wonderful motor had been conceived in a few days here in Washington, and that it had developed 400 horsepower, and that it had a wide range; that it could average from 150 to 200 and up to 400 horsepower, and that it was a standard motor and could be used for any purpose.

Some of us who had had some experience in flying before did not want to doubt, and we were willing to believe that the almost impossible had arrived. We had faith in American genius, and we really believed this was being produced.

Mr. FREAR. And that assurance was given elsewhere?

Mr. LA GUARDIA. Yes. I got there in October. In the meantime negotiations had already been started in this country with the French, the Italian, and the English Governments to furnish them with the Liberty motors.

Mr. FREAR. That was in September 1917.

Mr. LA GUARDIA. That was in October, 1917. Then, in the bombing work in Italy, the Frachini people and the Fiat people held back on the production of motors because they were going to get the Liberty.

Mr. FREAR. You mean purchase?

Mr. LA GUARDIA. Yes; and the factories were putting a great deal of faith in the Liberties, and the English also put a great deal of faith on the coming of the Liberty motor.

In February or March I officially presented to the Italian Government our commitments for Liberty motors.

Mr. MAGEE. In 1918?

Mr. LA GUARDIA. In 1918. In the meantime I had received some information from the United States and had spoken with some of our officers who had arrived from here, and I was very sure then

that when I officially delivered to the Italian Government our commitments for Liberty motors, we could not make good.

Mr. FREAR. Our contract?

Mr. LA GUARDIA. Our contract and our promise for deliveries. I will give you a copy of that.

Mr. FREAR. We will be very glad to have that.

Mr. LA GUARDIA. Whoever wired that information to France—and I believe we ought to fix that responsibility—must have known that we could not deliver those motors because they promised to deliver them there when they did not have them in this country.

Mr. FREAR. Promised to deliver them there?

Mr. LA GUARDIA. Absolutely. After working up the hope of the world on these motors, they sent three motors to France for test.

Mr. FREAR. When?

Mr. LA GUARDIA. I will supply the date. It was about March of 1918. The three motors they sent out had defective bearings, were improperly packed, one with the crank shaft broken or defective, so that when they were set up on the blocks they could not be used, and I will ask the committee to obtain the copy of a cablegram sent out by Col. Dunwoodie, through official channels, saying that if they could not do any better than that, please do not send any more motors.

Mr. FREAR. About what time was that?

Mr. LA GUARDIA. That was shortly after that; I will supply the date.

Mr. FREAR. I will say that we have inserted in the record a cablegram from Gen. Pershing dated June 24, 1918, wherein he pointed out 60 different defects.

Mr. LA GUARDIA. That was later on. That is on the De Haviland machine, and it was then generally stated in aviation centers and among flying officers that the man who was responsible for sending out those three motors, if he was a Hun he should have the iron cross, and if he was an American he should be shot.

Mr. FREAR. That was in Europe?

Mr. LA GUARDIA. That was the official sentiment among all the flying personnel. So then we lost months.

Mr. FREAR. We lost months because of this expectation of getting Liberty motors.

Mr. LA GUARDIA. We were waiting, and waiting, and waiting. I think we promised the Italian Government 1,500 Liberty motors.

Mr. MAGEE. You say we lost months. Do you mean the Americans over there in the aviation service lost months or the French and Italian and English Governments lost time?

Mr. LA GUARDIA. I mean the allied military cause. Out of the 1,500 Liberty motors which we promised the Italian Government we delivered exactly three second-hand, low-compression naval Liberty motors.

Mr. FREAR. At what time?

Mr. LA GUARDIA. September, 1918.

Mr. FREAR. September, 1918?

Mr. LA GUARDIA. Yes, sir; of course, we can deliver them now, but the Italian Government does not want them now.

Mr. FREAR. If it had not been for a few hours' delay Napoleon might have been in a different position on St. Helena, as we know, but of course here was a delay of months.

Mr. LA GUARDIA. I do not want to go into that side of it.

Mr. FREAR. We do not ask you to.

Mr. LA GUARDIA. But I want to say this: Perhaps we bombers believe too much in ourselves, and perhaps we think we could have accomplished more than we really could, so it would not be fair for me to make that statement. But the Hun was scared to death of the dirty work he himself had accomplished. He was scared of having his country invaded because he knew what he did to Belgium, and he was scared all the time because he knew what we had done to the enemy.

Mr. FREAR. Where did you get that understanding?

Mr. LA GUARDIA. From my knowledge of the situation, and from my knowledge of the German people, having lived among them for several years while in the consular service, and also from speaking with some of the prisoners, and from knowledge of the actual conditions. The flight that D'Annunzio made when he flew over Vienna, when he bombed that city with literature put the fear of the Lord into the Austrian people. We believed if we could have had the proper number of bombing planes and had started going after those cities, they would have yelled for us to stop.

Mr. FREAR. And it would have shortened the war?

Mr. LA GUARDIA. Of course, that is only the opinion of a bombing pilot.

Mr. FREAR. That was the anxiety that those people had?

Mr. LA GUARDIA. Yes; the Liberty motor finally came over, and so that there may be no misunderstanding I want to tell you that the first American airplane put on the front with a Liberty motor in it was put on the front during the month of September, 1918.

Mr. FREAR. Where was that?

Mr. LA GUARDIA. In France.

Mr. MAGEE. What kind of a plane was that—a fighting plane?

Mr. LA GUARDIA. No; it was an observation plane. We had 135 observation squadrons, and then we had 50 squadrons of the De Haviland 4s.

Mr. FREAR. That was the De Haviland 4?

Mr. LA GUARDIA. The De Haviland 4; yes, sir.

Mr. FREAR. That was the De Haviland 4?

Mr. LA GUARDIA. Yes.

Mr. LEA. What was that date?

Mr. LA GUARDIA. September, 1918.

Mr. FREAR. What are you reading from?

Mr. LA GUARDIA. I am reading from a photostatic copy of a statement entitled "Service squadrons assigned to armies on the front, 1918-1919."

Mr. FREAR. It is a statement from the official report?

Mr. LA GUARDIA. It is a photostatic copy of the official report; and Gen. Partick said in his report that in September 1918, we had two squadrons of 36 American machines, so that at that time they had just two months and ten days left at the front.

Mr. FREAR. Before the armistice?

Mr. LA GUARDIA. Yes, sir; Shall I give you the number in October; that is, the number in the service squadrons as of October 1, 1918?

Mr. MAGEE (interposing). Are those observations squadrons?

Mr. LA GUARDIA. Yes; we built nothing else.

In October we had the same two observation squadrons, and two squadrons which we used for day bombing, and in November about the same. There would be no interest in what we had in December, because everything was rushed up to the front then, and there was no purpose for which it might be used at all then.

Mr. FREAR. May I digress there? The testimony submitted to this subcommittee, and which was presented in the Thomas hearings, by men like Col. Clark and men like Maj. Muhlenberg and others, who are recognized authorities and flyers of years of experience, is that the DH-4 was not suitable for day bombing, the reason given being that it only carried about 2 hours' supply of gasoline when used to the full extent, and that it took 48 minutes to reach a ceiling of 15,000 feet, and that gave it such a limited time in the air that it was practically valueless for the purpose of day bombing. What is your observation on that, Mr. LaGuardia?

Mr. LaGUARDIA. Let me summarize: We started to adopt the DH's just when the English had taken it away from the front, and when they were doing away with it.

Mr. FREAR. When they regarded it as obsolete?

Mr. LaGUARDIA. Yes.

Mr. FREAR. And that is an English machine, is it?

Mr. LaGUARDIA. Oh, yes; with our motor, though.

Mr. FREAR. We put in the Liberty motor instead of using the Rolls-Royce?

Mr. LaGUARDIA. Yes, sir; and with protected tank it was better than ours.

And in that connection I ask the committee to get the address of Capt. Seaborn, who is a California boy, and get his report on the necessary changes on the De Haviland 4.

Mr. FREAR. Where was he when he made this recommendation to which you refer?

Mr. LaGUARDIA. I think he was at the receiving station at Romorantin. He had charge of—

Mr. FREAR (interposing). Do you know his present address?

Mr. LaGUARDIA. No, sir; but you can get it from the Air Service. He was at Romorantin, and later was stationed at Coblenz. Get him and get his report and all his memoranda of the necessary changes to be made in the De Haviland 4.

Another thing let me point out to this subcommittee: We kept telling the people on this side: If you send machines—that is, parts for the assembling of machines—send them on one ship, and if that ship goes down it will all go down and we will forget about it. But, on the other hand, they insisted on sending some of the parts on one ship and some of the other parts on another ship, and they came over in that way, and we had so many parts of machines that we could not put the whole together for the lack of some missing part.

Mr. FREAR. You could not assemble the machines on account of some parts being missing, having been sent on other ships?

Mr. LaGUARDIA. That is it exactly. They could not, if they had tried to do it on purpose, have acted in worse manner so far as results were concerned on the other side in the matter of assembling airplanes and using them.

Mr. MAGEE. Let me see if I caught that: The people on this side sent some parts for an airplane on one ship and other parts for the

same airplane on another ship, and inasmuch as the parts did not arrive on the other side together you were thereby prevented from assembling the complete planes?

Mr. LA GUARDIA. Yes, sir. And that, notwithstanding that we sent cablegram after cablegram telling them not to do it, and sent officers over here to tell them not to do it.

Mr. FREAR. And spare parts that they were supposed to supply were not forthcoming?

Mr. LA GUARDIA. As to that I do not know

Mr. MAGEE. Before you get off the subject of the Liberty motor I would like to know, in your opinion, just to what extent it was finally perfected for efficient use?

Mr. LA GUARDIA. The Liberty motor to-day is a good 400-horsepower motor. It has its defects; that is, it is not a perfect motor yet—it heats up a good deal, and takes a great deal of radiation, and, quite naturally, consumes a good deal of fuel, because of its 400 horsepower and being a big motor. It is a heavy motor, and you can not put it in a small machine. So, while it is a good motor, it has its limitations and defects, and—

Mr. MAGEE (interposing). You mean that you can not use it in all machines?

Mr. LA GUARDIA. Oh, no.

Mr. MAGEE. You can use it solely for a bombing machine?

Mr. LA GUARDIA. In any large machine. It is a good 400-horsepower motor, but you can not use it for training. Therefore you may readily understand that when they did actually stop production of every other kind of motor, and marshalled the whole strength of American industry on that one motor, they were very stupid or were acting from selfish motives, because it is impossible that they could have believed that one motor would fit every kind of plane; it was just simply impossible that they could have believed such a thing.

Mr. FREAR. Was there any great serious injury done to the allied forces during the war because of the fact that European nations, associated with America then in fighting the war, were persuaded to believe that the Liberty motor was going to be put into quantity production at an early day and thereby encouraged and even caused to let up in their own work—as you suggest occurred in Italy?

Mr. LA GUARDIA. I believe that. The Liberty motor is good for what I said it was. Gentlemen of the committee, the best test of the actual value of the Liberty motor is this: Try to sell a Liberty motor. They certainly have more Liberty motors than they have any present use for; have they sold any? Or have they tried to sell any? Could they sell any if they tried to do it?

Mr. MAGEE. I suppose what you mean is, that you must have one kind of motor for fighting machines, and a different kind of motor for observation machines, and a different kind of motor for bombing machines?

Mr. LA GUARDIA. Yes, sir; just the same as you have to have a different horsepower for different automobiles and trucks.

Mr. MAGEE. It would be impossible to have one motor for all machines for the different purposes?

Mr. LA GUARDIA. Oh, nothing is impossible. If you could get a motor with wide range of power it is just possible that that might cover the case; but that has not been developed as yet, and, I might

add, that when you get that kind of motor, with wide range of power, then, of course, everything will become more practical in the flying line, and it will be better than any other means of communication.

Mr. FREAR. Right in that connection, let me ask: The rapid development of motor engines has continuously changed the motors in use, just like the rapid development in any other branch of industry is changing the machines in use, and the Liberty motor which may be in use now may be of but little service a short time in the future. In other words, there may be and probably will be rapid development, and the present engine may become obsolete a year from now?

Mr. LA GUARDIA. Oh, yes; but I am speaking now with my eyes directed and my mind directed to 1917-18; and in that connection I say this without hesitation, that the motor which they turned out was not worth stopping everything else for; that it was a mistake, and a very serious mistake, not to have started out making other types of motors, such as the Hispano-Suiza, which they did eventually do, and they succeeded in turning out quantity production at a late day, and which I think answers the contention that they could not get into quantity production on airplane engines of the foreign models.

Mr. FREAR. The Hispano-Suiza was produced in large quantities by our own Government?

Mr. LA GUARDIA. Yes, sir.

Mr. FREAR. Where?

Mr. LA GUARDIA. In New Jersey. In November, when the armistice was signed, it was being turned out.

Mr. FREAR. Have you any estimate or figures on the production of the Hispano-Suiza engine?

Mr. LA GUARDIA. No; but they can be furnished.

Now, then, I gave you the number of airplanes here. A commission went down into Italy before we got there to buy machines——

Mr. FREAR (interposing). An American commission?

Mr. LA GUARDIA. Yes, sir. The Italians at the time had the SPA in use, and they had the Pomigli, and they had the SIA on paper. And what did the commission do? They bought the SIA, which was on paper; bought 500 of them. The SIA was a beautiful machine in theory, and should have been a splendid plane, but it had too much power in it, the motor was too heavy, and the construction too weak, so that it had the fault of buckling in the air. The Italians had a great deal of trouble with the SIA before they started delivery to us. I think I received 10 machines at our school, and some were sent to France. I found that the machine was defective, and I stopped deliveries of the machine. Thereupon I was called to Paris and asked upon what authority I had canceled the contract of the Government. I reasoned that I had the same authority to stop deliveries of that type of machine as I would have authority to stop the issuance of defective meat to my men.

Mr. FREAR. Or that they had to stop the Bristol when fitted out with the Liberty motor?

Mr. LA GUARDIA. Yes, sir; the same situation. Then down at Tours, just in a spirit of contradiction if nothing else, they said: "We are going to reinforce these machines and use them for training purposes."

Mr. FREAR. Who said that?

Mr. LA GUARDIA. The American commanding officer at Tours. I took the matter up with Gen. Fallay and, after he was relieved, with Gen. Patrick—and that was my only time in the military service that I had to stand upon my position as Congressman. I told them that if they persisted in using these machines and anything happened—and I had lost men on them, and the Italians were losing one after another of their men—in fact, we used to call it the Austrian Ace machine, because it brought down more Italians than enemy flyers.

Mr. FREAR. Although it was an Italian machine?

Mr. LA GUARDIA. Yes, sir. I said if they intended to continue using that machine I would resign my commission and come back to Congress. The result was that the machine was not used, and we did not accept any more of them from the Italians.

And in this connection let me state that after I refused to use those machines the Italian pilots came to me and asked about matters, and I explained to them what had happened, and then they signed a round robbin, and the Italian Government took that machine from the front. It was understood that we would not use those machines, but would use the motor, which was the Fiat.

I hope that was carried out, and I would like for this committee to find out if anything was paid for those machines; and if so, I would like to testify before this committee further on that subject.

Mr. LEA. How many of those machines were delivered?

Mr. LA GUARDIA. Eighteen in France, and I think I got about 28. We crashed about 5 of them and the rest we left there dismantled.

Mr. MAGEE. This was what machine?

Mr. LA GUARDIA. The Italian SIA. I lost one man. We watched the men very carefully, but we lost one man, and then I stopped their using it.

Mr. FREAR. And that was due to the fact that the machine was defective?

Mr. LA GUARDIA. Oh, yes. The SIA-9 was a good machine—and this was the SIA-7-B—but the SIA-9 never got into production. The Caproni bomber was the best night bomber used during the war. We bought some Capronis, and got some deliveries.

As to night bombing, I want to call the committee's attention to our contract with the Handley-Paige: I consider that one of the biggest blunders of the Air Service.

Mr. FREAR. In what respect?

Mr. LA GUARDIA. Well, the contract was executed—and I may be a little off in my months—as late as April or May, 1918. We start off with agreeing to send men to rebuild the Manchester cotton fields for factories for Handley-Paiges. We agreed to build side tracks, and lines, and all sorts of things in England. To make a long story short—

Mr. MAGEE (interposing). In what part of England?

Mr. LA GUARDIA. In the Manchester district, I think, but the contract will tell you that. In that connection we paid them something like \$3,000,000, to the Handley-Paige people, and did not get for that payment even a photograph of the machine. All that money was placed in fixing the factories, which were going to build these planes for us. Furthermore, at the time when we contracted for

these Handley-Paiges, and it was a contract involving several million dollars, the Handley-Paige as then contracted for, was an obsolete machine for that purpose—

Mr. MAGEE (interposing). Already what?

Mr. LA GUARDIA. An obsolete machine for that purpose. It did not have the climbing power of the Caproni, and did not have the speed of a Caproni.

Mr. FREAR. Was it used on the front at that time?

Mr. LA GUARDIA. Yes, sir; the English were using it for night bombing, but not to the extent we were going to go into it. I think they were gradually getting away from it, because while we were buying Handley-Paiges in England the English were in Italy trying to buy Capronis. The same thing happened in this country; we spent millions of dollars in this country on Handley-Paiges—and I asked a gentleman to-day to find out for me if we have one single Handley-Paige in this country that has any life as a flying machine; every one of them crash. I do not think we have one left.

Mr. FREAR. There has been considerable in the reports we have seen, and in the testimony we have taken, to the effect that the Handley-Paige was one of the very valuable machines, and was put into quantity production toward the last?

Mr. LA GUARDIA. I do not agree with them, and for this reason: Toward the last of the war both sides had developed night flying quite a bit, night fighting, and they would send machines out at night to attack us. It was my belief that if the war had continued six months more we would have had to discard entirely all of the big slow machines, because the other fellow would get us.

Mr. FREAR. That is, you mean the Austrians and the Germans would get our men?

Mr. LA GUARDIA. The enemy would get our men, the same as we would get theirs at times.

Mr. FREAR. What were the names of their machines?

Mr. LA GUARDIA. The Folker, the Albatross, and several others.

Mr. FREAR. The Mercedes engine was what?

Mr. LA GUARDIA. I think they used that in some of their fighting machines.

As to the system of lighting at night, the Italians had developed a system of lighting whereby instead of attacking in the dark they would wait until they got near the place and then illuminate the whole territory. In the meantime they had pursuit machines above, and those machines would come over the illuminated territory and pounce down upon the enemy. So we were coming to a time when the big slow machines were being discarded and faster machines were being adopted. The Handley-Paige was a machine of slow movement, which is naturally slow on account of its weight and other conditions. They were doing good work bombing across the channel, for that particular purpose, and it was accordingly good as it carried a big weight, and it would do good work for that, but I do not believe the contract we entered into with the Handley-Paige people, to the extent that that contract went, was justified at all.

I will ask the committee to get a copy of that contract and see how far we went in it. We already had at that time, mind you, 15,000 American mechanics in England, and we could not draw one man from them unless we replaced him.

Mr. FREAR. You mean at that time?

Mr. LA GUARDIA. Yes, sir; at the time when we entered into this Handley-Paige contract.

Mr. FREAR. Where did they come from?

Mr. LA GUARDIA. They were soldiers, taken from the United States. They were taken from the United States and put into the English factories and were paid soldiers' pay, 15,000 of them. The original purpose was all right, but—

Mr. FREAR (interposing). Throughout this period?

Mr. LA GUARDIA. I am coming to that. As I say, the purpose of it was all right, which was to put them in aviation factories and let them get experience, and then we would draw them out and put them in squadrons. When we contracted with England to take those 15,000 men we agreed to keep them there and not take them away unless we replaced them. We got our men in there, and then when the Allies put the priority-shipment order on, after the spring attack, when we could only send certain men, certain kinds of troops, we were put in a position where we could not ship over men to replace these boys we had in the English factories—and that was the very time when we needed mechanics in our squadrons, but we could not take a man out of England.

Mr. FREAR. How long did they stay there?

Mr. LA GUARDIA. Until the end of the war.

Mr. FREAR. At soldiers' wages?

Mr. LA GUARDIA. Oh, yes.

Mr. FREAR. Then, if the testimony which was presented to the committee on yesterday, to the effect that in the spruce woods of the West men were not only exempted from actual warfare, men who were in the service, but were being paid the wages paid in the civilian West, running from \$3.50 a day to \$10 a day—I say, if that is true, it would seem that there has been some discrimination against the American soldier abroad.

Mr. LA GUARDIA. Well, of course he was a soldier, and had to go where he was sent.

Mr. FREAR. But these were soldiers in the western part of this country.

Mr. LA GUARDIA. And they were paid extra?

Mr. FREAR. Paid the going civilian wage.

Mr. LA GUARDIA. As soldiers?

Mr. FREAR. Yes.

Mr. LA GUARDIA. I never heard of such a thing.

Mr. FREAR. I felt sure you hadn't.

Mr. LA GUARDIA. Is that correct?

Mr. FREAR. I take it to be so, as the testimony we have had all goes one way.

Mr. LA GUARDIA. Well.

Mr. FREAR. They were paid civilian wages, not only the men in the fields and forests, but they were exempted from any military service.

Mr. LA GUARDIA. Well.

Now, as to the possibility of building Capronis, either here or in Italy, I respectfully suggest to the committee to see Mr. Frank Briscoe, who can be located at the Briscoe factory at Detroit, and who made a special study of Caproni production.

Mr. FREAR. We were able to undertake Caproni production here in this country, then?

Mr. LA GUARDIA. Yes, sir; but it was retarded.

Mr. FREAR. I understand it was; but would we have been able to have undertaken it and gotten production?

Mr. LA GUARDIA. Oh, there is no doubt about that.

Mr. FREAR. If we had devoted any energy to it instead of centering everything on the Liberty motor?

Mr. LA GUARDIA. Yes. Lieut. Harris made a flight of 1,000 miles in a Caproni from Detroit to Texas, with another machine following. If you can show me one Handley-Paige in this country that made that record, I will eat all the testimony that this committee is going to take.

Mr. FREAR. You have driven Capronis almost entirely in fighting across the sea?

Mr. LA GUARDIA. Yes, sir.

Now, I wish to ask this committee, as to the comparative value of these machines, to hear the testimony of Lieut. Harris. I would suggest that you hear the testimony of Lieut. Harris, and Lieut. Spencer Carr, and Lieut. Agar.

Mr. FREAR. Where were they?

Mr. LA GUARDIA. They were in Italy, and they were the three men I sent home to instruct others to fly Capronis to be produced in this country.

Mr. FREAR. And they had no opportunity to do that because no Capronis were manufactured?

Mr. LA GUARDIA. Oh, yes; we produced some here.

Mr. FREAR. How many?

Mr. LA GUARDIA. When the armistice was declared, I think they had ordered 1,000 in this country.

Mr. FREAR. But how many had been produced?

Mr. LA GUARDIA. At the time of the armistice?

Mr. FREAR. Yes.

Mr. LA GUARDIA. I do not think any.

Mr. FREAR. Of course, I know that orders were given, but I do not think any were furnished. These interruptions, as I can readily understand, break up your line of thought, but they are very helpful to the committee in getting the information as we go along.

Mr. LA GUARDIA. All right.

Mr. FREAR. You were giving us a few minutes ago——

Mr. LA GUARDIA (interposing). Yes; I know. Another thing I want to call to the attention of the committee, although it may not be necessary, as they probably have it in mind, is the vast amount of money spent in this country on fields to which we did not have title.

Now, for instance, take the Selfridge Field——

Mr. FREAR (interposing). Where was this?

Mr. LA GUARDIA. In Detroit, I think. The Selfridge Field is below the level of the lake, and I think Mr. Joy Baker has an interest in it. Anyhow, we went there and drained that ground and made it a really beautiful place; we spent a large sum of money on it. We do not own it, so we are in this position, that we either have to pay an exorbitant price for ground which we have made, or turn it back, considerably enhanced in value by ourselves, and let the other people have the benefit of it.

Take the situation in Dayton, Ohio: I think McCook Field—or I am reliably informed that the ground was owned or controlled by Col. Deeds and Mr. Kettering, who were in the Air Service. They, or the company that owned the ground, leased it to the city of Dayton, and the city of Dayton leased it to the Government. We went there and spent a large sum of money to fix that ground for a field, and put up buildings; and just the other day the Secretary of War came before our committee (Committee on Military Affairs of the House) and pleaded that the one thing that he wanted—but if you will read his testimony you will see that he had no policy as to anything else—that the one thing he wanted was to buy the field in Dayton, Ohio.

Mr. FREAR. Let me ask you in passing: Is that the field that was shown in the Thomas hearings would be 40 feet under water, under the Miami River, or some other river?

Mr. LA GUARDIA. I do not know. That may be the Selfridge Field.

Mr. FREAR. No; it was the field at Dayton, I think. It must be the Wilbur Wright Field.

Mr. LA GUARDIA. I looked into that, and he said they would have to give up—it was stated that the McCook Field would have to be given up and returned to the city of Dayton. I found as to the McCook Field that the lease does not expire until 1927. They want to buy a field near the Wright-Dayton works, which is owned, I think, by the Morania Land Co.—and I am reliably informed by some of my friends in Ohio that the same people who own the McCook Field control this company that owns the other field. Now they want to sell this field to us, and ask us to pay \$3,000,000 for it. They have this situation in Dayton: That we have developed a field, and have a lease on it until 1927—

Mr. FREAR (interposing). The McCook Field?

Mr. LA GUARDIA. Yes. They want to release that field to the owners, enhanced in value, and go up and buy another field from the same people for \$3,000,000.

And, Mr. Magee, that answers your question as to appropriating money for the fiscal year. These are the kind of people who are howling now, and saying we are destroying aviation in this country—they are the disappointed people; the people who want \$3,000,000 for this field and the people who want money for other fields.

They want \$3,000,000 for a field down in New Jersey to build a dirigible station, or hangars. Assuming that we did appropriate the money they want, they could not possibly be finished during this year, and it has nothing whatever to do with the development of aeronautics in this country. They wanted \$980,000 from us to buy ground adjacent to some buildings on which we spent several million dollars in Buffalo, N. Y. I investigated that and found that we were using those buildings for storage purposes, for storing motor trucks.

Mr. FREAR. That is the Curtiss Co.?

Mr. LA GUARDIA. Yes; so that is not necessary at this time.

What I am striving to have done is this: Take an inventory first, and find out just what we have in this air service of ours; what we have gotten for \$1,000,000,000; find out how much of this stuff is actual junk, and how much we can use, and determine upon a policy, so that we will know just what land we will need, and find out just

how much of this land we actually own, or have to return, and then appropriate money. In that way we will get somewhere. But if we keep on in this way I tell you that any money that is appropriated is very risky.

Mr. FREAR. I will ask you right in line with that, if there has been, so far as you know, any inventory up to date on the air machines that are in this country?

Mr. LA GUARDIA. There was not, so far as I can ascertain, Mr. Frear, and I want to tell you this: I was appalled when I heard that we had sold \$22,000,000 worth of Curtiss planes OX-5 motors, standard planes, back to the Curtiss people for \$2,000,000.

Mr. FREAR. \$22,000,000 worth sold for \$2,700,000; wasn't that the figure?

Mr. LA GUARDIA. Yes, sir. I have a copy of the contract. This is what happened—

Mr. FREAR (interposing). That contract was introduced in the record by this committee on yesterday.

Mr. LA GUARDIA. They got away with this purchase because it was intimated to the Secretary of War that the most of this stuff was junk. But even as junk it would have brought more than that amount, because wood is scarce to-day, and metal is scarce, and it would have brought more than that at any rate. So that we have our boys all through the country asking to buy planes, so that they can keep in trim for fighting, because if a man is out of the air any length of time he will get rusty, and yet the Government says: "We can not send you any planes"—

Mr. MAGEE (interposing). Right there: I understood that to be the case, but the Secretary of War said on yesterday they would sell them at \$400 each.

Mr. LA GUARDIA. I am coming to that. They tell you they won't sell any planes, but the Curtiss people will, and they will sell them at \$3,500 each. They buy these planes from the Government for a very small price and then they will sell them at \$3,500 to people who want to buy them.

Mr. FREAR. Up to \$5,000, which was shown in the record?

Mr. LA GUARDIA. Yes, sir. Now, the Secretary of War was before our committee (Committee on Military Affairs of the House) and I will say—I think it is section 15 of the contract—would warrant him to rescind that contract. It would be the proper thing to do. Section 15 provides that if the Government needs these machines they can withdraw the sale.

Now, then, while we are without a policy as to our Air Service, the least we can do is this: To say to the ex-fliers of the Army and to the reserve military aviators, if you will agree to keep in training, and fly so many hours a week, or so many hours a month, we will sell you machines or lease you machines at a certain price. In that way we could have our machines all over the country, in the hands of these men, and they would be training, and we would not be giving back millions of dollars to the same people who made millions of dollars selling us these various machines.

Mr. FREAR. Up to \$5,000 was shown in the record yesterday.

Mr. LA GUARDIA. The Secretary of War was before our committee yesterday and stated up to \$5,000.

Mr. MAGEE. But if the Secretary claims that he will sell individuals a machine for \$400, why should that individual pay the Curtiss Co. \$3,000?

Mr. LA GUARDIA. That is what I am trying to tell you; he should not. I note it can be canceled under section 16 of the contract.

Mr. FREAR. This is also their contract, following out the inquiry just made, is it not, that where machines had not been put upon sale, according to the suggestion of the Secretary of War, to flyers—

Mr. MAGEE (interposing). That is what I wanted to get at. It represents what my experience has been, and my inquiries have been along that line. I made a statement in the House that I understood an individual could not buy a flying machine—a Curtiss machine.

Mr. LA GUARDIA. Could not buy a Curtiss machine?

Mr. MAGEE. That is as I understood it. What I would like to know is whether these machines have been offered to individuals at \$400, or whether any individuals have had any opportunity to buy.

Mr. LA GUARDIA. The answer is, no. I know this much, that a good many of ex-flyers have written to the department for this same type of machine. It is a good machine; it is a low-power machine, and the man who is in business now doing other work and not exactly in flying trim can take some flights a couple of times a month and feel reasonably safe in them. And so far I will venture the statement that not a single, solitary machine has been sold except for deliveries to the Curtiss people.

Mr. MAGEE. What I mean is this: If it were generally known as a fact that flyers in this country, or young men who would like a flying machine, could buy one of the Government for \$400, he certainly would not buy the same kind of a machine from a company at \$3,000 or \$3,500?

Mr. LA GUARDIA. Why, of course not; that is why I am trying to get the Secretary of War to rescind his contract with the Curtiss people.

Mr. FREAR. That was suggested to the Secretary of War by this committee yesterday.

Mr. LA GUARDIA. To come back to your question, Mr. Frear, to the inventory: I have been unable to obtain any intelligent information as to just what the situation in that respect was. I had introduced, as you know, sometime ago a resolution which I conferred with you about, and it was passed by the House yesterday. This will compel the Secretary of War to furnish to the House an inventory showing the number of planes we have, where located, how many hours they have flown, what they cost; the same as to motors, the same as to spare parts, and the same as to material.

This inventory can be used also by the sales department in disposing of our surplus supplies, so that they may have intelligent information.

Mr. FREAR. I will ask that you get a copy of your resolution and have it inserted in the record with your statement.

Mr. LA GUARDIA. I will do that.

After we know what we have, I venture the prophecy that we will find that a good many of our supplies are out of proportion, that we have too much of one thing and not enough of something else.

I also desire to suggest to the committee that they go into detail as to where our surplus of Liberty motors are stored and the manner

in which they are stored. We do not want these machines to go to ruin in the course of six months, and I would advise that the best engineering advice in the country be obtained as to the best manner of storing these Liberties, so that we can keep them indefinitely.

If the Liberty motors are simply stored in their original boxes, as they would be for shipment, they can not last more than a year; they would ruin and deteriorate.

I also want to point out to the committee that they should in the course of their investigation look into the purpose, the scope, the necessity and the expense of the so-called Lockhart Commission, which came to Paris—were going to do all sorts of things there.

Mr. FREAR (interposing). Was that an American commission?

Mr. LA GUARDIA. That was an American commission, and Col. Dunwoody sits there [indicating], and he might be able to tell you some of his experiences with them. They came in large numbers, splendid retinue, and so far as I can ascertain accomplished absolutely nothing.

Mr. FREAR. Did they remain in Paris all the time?

Mr. LA GUARDIA. They remained in Paris all the time—so, they traveled, I suppose, but they remained in Paris. Our Air Service quartered them and gave them all the information they wanted. But their purpose is worth looking into.

Mr. FREAR. Who composed the commission?

Mr. LA GUARDIA. This gentleman named Lockhart was the head of it and there were several civilians.

Mr. FREAR. Who was Lockhart?

Mr. LA GUARDIA. Col. Dunwoody can tell you.

Col. DUNWOODY. He is the member of the firm of Goodrich-Lockhart Co., of New York.

Mr. FREAR. What was their business, Colonel?

Col. DUNWOODY. I think he is a banker and broker. He is also in the Goodrich business.

Mr. MAGEE. Do you mean, Congressman, that this commission was appointed by any duly authorized authority in this country?

Mr. LA GUARDIA. I think it was not.

Mr. FREAR. For how long a period were they over there?

Mr. LA GUARDIA. When did they arrive, Colonel—it was about May, was it not?

Col. DUNWOODY. I should say they were over there four or five months.

Mr. FREAR. Do you know what their recommendations were, if anything?

Mr. LA GUARDIA. No; but it is a matter of official record.

Mr. LEA. In that connection, when was it they went over?

Mr. LA GUARDIA. I think it was about April or May—may I go back a minute? I am sorry to give my testimony in such a disjointed manner.

Mr. FREAR. Colonel, when did they go over?

Col. DUNWOODY. I should say about that time.

Mr. FREAR. 1918?

Col. DUNWOODY. 1918.

Mr. LA GUARDIA. May I go back to the D. H. machines and point out that the D. H. machines which we sent back were cased, a complete machine in a box; those were sent back here.

The CHAIRMAN. At what time?

Mr. LA GUARDIA. After the war.

Mr. FREAR. You sent them back?

Mr. LA GUARDIA. Oh, yes; a large number, completely cased, complete machines. I want to point that out in connection with what I said before as to the way we shipped them here.

Mr. FREAR. When were those received over there?

Mr. LA GUARDIA. I guess we got the first over there about July.

Mr. FREAR. The testimony has been taken in New York by Chairman Johnson's committee, at the request of this subcommittee, showing that a large number of machines, 320, I believe, were burned over there in France, and the photographs of the fire were handed to the Secretary of War by this committee. Do you know what the purpose of burning these machines was?

Mr. LA GUARDIA. I read reports of that in the paper.

Mr. FREAR. We had the photographs of the burning.

Mr. LA GUARDIA. I can not understand that, and I do not believe that they were burned on the orders of the chief of air service.

Mr. FREAR. That is, you believe they were burned without any orders from headquarters?

Mr. LA GUARDIA. I can not understand how that happened, in view of my knowledge and personal acquaintance with the men out there and knowing how they appreciated the value of wood and metals, and even of linen; I do not see how that happened.

Mr. FREAR. They were marked for the identification of the machines, so that, as I understand, they were American machines.

Mr. LA GUARDIA. That is something that is beyond me. I do not know how it would happen. I believe our service men had nothing to do with it, because nobody appreciates the value of a flyer any more than they do.

Mr. FREAR. That may be true, but when we are selling machines as low as we are in this country, transportation and other matters might have interfered.

Mr. LA GUARDIA. They could have taken that wood to Italy and almost got its weight in gold; they could have chopped up the motors and sold them to Germany at almost any price. It is valuable. You have no idea how scarce materials are in Europe to-day. There is no explanation for it. I can not understand how it was done.

Mr. FREAR. May we ask you, Major, to get back to our Italian situation there? We interrupted you about machines that were in service. I want to know, briefly, what was done during the war while you were there, what machines were used and whether any machines were furnished to the Americans.

Mr. LA GUARDIA. Our boys had finished the elementary training, and were sent to France for advance training, pursuit and observation schools, and then some were sent to schools to train for bombers. A large number of these men were sent north in France and England to go into bombing work, and some of us were detailed to the Italian front. I had at the Italian front at all times about 60 men. We kept them there training with a few machines, if we could, and then sent them north. They would go right in squadrons. We had none of our own machines in Italy at all.

Mr. FREAR. At no time?

Mr. LA GUARDIA. At no time.

Mr. FREAR. At no time was an American-made machine in Italy.

Mr. LA GUARDIA. Never, and no machines were actually owned.

Mr. FREAR. And from what time were American flyers engaged in Italy?

Mr. LA GUARDIA. We went there to train in October of 1917, and we got to the front in June of 1918. At the front, inasmuch as we had no machines of our own, or in complete squadrons, we were divided and assigned to Italian squadrons. Each Italian squadron had so many Americans in it and a Caproni would fly with an American and Italian crew.

Mr. FREAR. About how many men did you have there on the front flying?

Mr. LA GUARDIA. Sixty men at all times.

Mr. FREAR. On the Italian front?

Mr. LA GUARDIA. Yes, sir. I was in command there, and I would send Col. Dunwoody down an order for 15; I would send up 15 and take 15 out of the bombing school.

Mr. FREAR. Where was Col. Dunwoody?

Mr. LA GUARDIA. He was our commanding officer in Paris.

Mr. FREAR. You were flying yourself during a portion of this time?

Mr. LA GUARDIA. Yes, sir.

Mr. FREAR. And bombing?

Mr. LA GUARDIA. Yes, sir.

Mr. FREAR. And used the Caproni throughout?

Mr. LA GUARDIA. We used the Caproni. We took about a half ton, or 700 pounds, of explosives at night trips.

Mr. FREAR. What period of time did you say that machine could maintain itself in the air with the fuel supplies?

Mr. LA GUARDIA. Those machines we used, four hours. But Caproni had his machines rigged up for six-hour trips.

Mr. FREAR. How far would that take you?

Mr. LA GUARDIA. We had a safe radius of 200 miles and back. We never flew that far, however.

Mr. FREAR. How close to the battle line were the machines ordinarily?

Mr. LA GUARDIA. It would take us from 15 to 20 minutes to reach our ceiling and get into the enemy's territory.

Mr. FREAR. How long would it take the Caproni to reach his ceiling—to rise up?

Mr. LA GUARDIA. I can give you the exact figures on that.

Mr. FREAR. How long; do you know?

Mr. LA GUARDIA. Ten minutes.

Mr. FREAR. The testimony here was that the De Haviland time was 48 minutes.

Mr. LA GUARDIA. I can give you that exactly. We were given 10 minutes over the field, and that would take us a thousand feet up, and we had to go up 14,000 feet when we went over the mountains, and I should think that would take us 30 to 35 minutes.

Mr. FREAR. Did those Caproni machines have a longer period of flying?

Mr. LA GUARDIA. It was different type.

Mr. FREAR. A heavier machine?

Mr. LA GUARDIA. A heavier machine.

Mr. FREAR. But the De Haviland 4 is spoken of as the machine we eventually furnished.

Mr. LA GUARDIA. It was not fit for fighting.

Mr. FREAR. It was not fit for fighting? It was not equipped for bombing, when it took 48 minutes to reach the ceiling?

Mr. LA GUARDIA. It would not be an answer. It took 48 minutes for it to reach its altitude on our own territory, and then go across at the 14,000 feet. I think the De Haviland 4 could be used as a day bomber at that time.

Mr. FREAR. The testimony of Col. Clark and of others who were using it, as I understand, was that it was not qualified for bombing, and they gave this as an objection; that is the testimony put into the record.

Mr. LA GUARDIA. When we went out with Capronis in the daytime we went out with squadrons, with machines all around us.

Mr. FREAR. You had a long time you could spend in the air. The DeHaviland 4's could only carry for two hours, and three-fourths of the time was expended in riding to the ceiling.

Mr. LA GUARDIA. We would generally take out with us two and a half hours of fuel, and load up the rest with bombs, and in the daytime we had the pursuit fleet with us, and when we were attacked the pursuit fleet would take care of them, and we had two gunners, one front and one rear, in case of emergency.

Mr. MAGEE. The De Haviland 9 has been spoken of as a machine that was eventually being prepared and as a bombing machine and fighting machine. That is a heavier machine?

Mr. LA GUARDIA. That is a heavier machine.

Mr. MAGEE. It was claimed that it was being placed in production at the conclusion of the war.

Mr. LA GUARDIA. We did not get any, did we, Colonel?

Col. DUNWOODY. One machine. We got an English machine that had been shipped over and which was lost on its way.

Mr. FREAR. May I ask on what front it was eventually used in fighting?

Col. DUNWOODY. It never got on the front.

Mr. FREAR. As a matter of fact, we never had anything better than the De Haviland 4?

Mr. LA GUARDIA. The number I gave you. But we had the best men in the world.

Mr. FREAR. And were those men supplied—the men who did fly—with what machines we did supply?

Mr. LA GUARDIA. They had Spads and Newports and Sampsons and anything; and I want to say in this connection that if we did have any men at the front, if we did not get any machines—and sometimes we did not get as good machines as we ought to have got—that was due to the ingenuity and the policy and other skill of Col. Dunwoody, who is right here. How we got them, we do not know. I would hate to find out.

Mr. FREAR. You did not get them through the ordinary red-tape procedure with which we are all familiar. I do not know whether it is material or not, but I thought what Gen. Mitchell said was of interest about the steel contract.

Will you state what the steel contract was—first, was there anything about this suggestion which has been made that you over there

endeavored to cut red tape where ever necessary and supply the needs of the service?

Mr. LA GUARDIA. In this instance we had promised Italy to furnish a certain amount of raw materials.

Mr. FREAR. That is, this Government?

Mr. LA GUARDIA. This Government. And owing to shortage in tonnage, of course, we could not deliver; and owing, also, to the fact that after the retreat in October, 1917, Italy was entirely without food. So some of that tonnage had to be used to get wheat and flour over. The Italian Government knew they could get some steel and hardwoods from Maine and also copper. But they could not buy it, because their exchange was shot to pieces, and it made the price prohibitive. I heard about this, and I went to the air minister, and told him that if I could arrange to get that stuff for him, if he would credit the United States for that amount, thereby cutting down the amount of raw material which we had to send from the United States and reducing our tonnage. He was tickled to death. The necessity and the logic and the usefulness of this was plain. I went with my little idea to Paris, and I knew that if I went against any of the "hard-boiled" Army regulations there I was done for. So Col. Dunwoody and I went into conference and we got hold of McFadden, who was a United States Treasury man, a business man, and he had all sorts of regulations over him. But he saw the necessity for this, and he said, "You go down there and get this steel, and we will find out to pay for it later." We drew up a contract, which was signed by Col. Dunwoody, and I also signed it, and the Italian official signed it, arranging to take the food. We paid for all of this stuff, and they credited us that much.

Mr. FREAR. This was steel?

Mr. LA GUARDIA. Steel, and anything I could buy—steel, copper, and hardwood, and mark you, this was not to be paid for in bonds; this must be deducted cash, and we had to pay Italy.

Mr. FREAR. Cash and the rate of exchange, and everything was settled?

Mr. LA GUARDIA. So, the rest of the story is simple. We went down there and got the stuff. Just how we got the stuff out is not a matter of record. We got steel and copper, and we were on the way toward getting wood, and that wood was sought from time to time after that.

Mr. FREAR. The reason for bringing that out is the question of control by the present methods that govern the War Department, whether or not it was tedious and became embarrassing to quick action that is sometimes necessary in providing material for the air service as well as other lines of service; and that is brought before the committee by various suggestions that it be placed in another branch of service or an independent branch of service and certain assignments to be made of material when provided to the War Department or Navy Department or other branches.

Mr. LA GUARDIA. In that connection I want to say this, that, for instance, the Navy seemed to have more freedom of action than we had, although their service was much smaller; they were able to get stuff. For instance, nothing held them back; they even came down to Italy and tried to overbid on machines we were buying; they were not hampered by anything.

Mr. FREAR. That is, we were in competition with ourselves—two branches of service?

Mr. LA GUARDIA. Yes, but we stopped that down there. But I understand here, and even France where the colonel had some trouble, they were not permitted to buy anything.

Mr. FREAR. That could have been avoided provided the entire service could have been under one control so as to have made assignments.

Mr. LA GUARDIA. And what showing we did make at the front with our men, whatever may be said about the machines, sometimes they had Nieuports when they should have Spads, and sometimes they did not have the best Spads.

Mr. FREAR. Sometimes we did not have the best Spads—why not?

Mr. LA GUARDIA. We could not get them.

Mr. FREAR. What would you get?

Mr. LA GUARDIA. What we could get in France.

Mr. FREAR. Spads they were willing to let you have that they were not using themselves?

Mr. LA GUARDIA. They were not willing to let us have them. I do not know how we got them, but it was through the efforts of Col. Dunwoody; that is why we made the showing, because we cut the red tape.

Mr. FREAR. Were they seconds the French were using?

Mr. LA GUARDIA. Toward the end they were good.

Col. DUNWOODY. They were exactly the same as the French. The product was at last divided, and we got about two-fifths of their machines. The machines would come right out of the factory, and one would go to the French and one to America.

Mr. MAGEE. What did we actually accomplish in the aircraft from the time we entered the war April 6, 1917, to the date of the armistice, 1918?

Mr. LA GUARDIA. As far as we were concerned over there?

Mr. MAGEE. As a factor in the war?

Mr. FREAR. You mean in machines or men?

Mr. MAGEE. I say, what did we accomplish in the aircraft service?

Mr. FREAR (interposing). Production?

Mr. MAGEE. He can answer the question. I mean as an efficient arm of the service in the conduct of the war?

Mr. LA GUARDIA. Well, I think, Gen. Pershing is fair to us in his statement that at St. Mihiel we rendered very valuable service, and were up to the mark.

Mr. MAGEE. In the machines of American manufacture—that is what I am talking about; not of the personnel. But what we did accomplish in the aircraft from the standpoint of American manufacture?

Mr. LA GUARDIA. My reply to that and my personal opinion is practically nothing. We would have been just as well off without those four squadrons of D. H. at the front as with them.

Mr. FREAR. It appears as a matter of record, as I understand it, that the personnel of the American airmen is evidence of the fact that it was Gen. Mitchell who was in command at St. Mihiel—had command of all the airmen—

Mr. LA GUARDIA (interposing). Of that sector; that was our fight.

Mr. FREAR. Who had command on the Italian front?

Mr. LA GUARDIA. I did, of the Americans.

Mr. FREAR. He had command of both the Americans, the British, and the French?

Mr. LA GUARDIA. Oh, yes; that was our fight, and he was in general command.

Mr. FREAR. So that it showed the reliance that was placed upon our men when given positions of responsibility?

Mr. LA GUARDIA. We were in command of everything—in command of a division fighting there.

Mr. FREAR. How many machines did we have there, would you say, in that battle?

Mr. LA GUARDIA. I do not know. Gen. Mitchell could tell you that.

Mr. FREAR. Is there anything else that occurs to you?

Mr. LA GUARDIA. No; except I would like to reserve the privilege—I have not gone through all of my memoranda, as I have several bags of it, and if I find anything of importance, I would like to come back.

Mr. FREAR. We would be very glad to have you and to have you add anything that occurs to you. Is there anything valuable in this data that ought to be added in the record?

Mr. LA GUARDIA. You will get that from Gen. Mitchell. I will be glad to loan it to you.

Mr. LEA. I would like to ask a few questions. Mr. La Guardia, when did you enter the service?

Mr. LA GUARDIA. I think it was August, 1917.

Mr. LEA. I understood you were commissioned lieutenant in August.

Mr. LA GUARDIA. No; I think it was 1916.

Mr. LEA. And what training did you have before you were commissioned?

Mr. LA GUARDIA. In 1915 the most of my friends went to Plattsburg. I could not go because I was too short. So I went out to Mineola and took a course at a private flying school and thought I was doing some flying. I just got the rudiments of flying.

Mr. LEA. But a certain amount of training preceded your commission?

Mr. LA GUARDIA. Oh, yes, sir.

Mr. LEA. And that was a part of the requirement, that every man has to have certain qualifications?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. I did not depend on time, but as soon as a man could qualify he would be given a commission; is that the idea?

Mr. LA GUARDIA. Oh, no; I was not given a commission until after I entered the service.

Mr. LEA. You did have training preceding your entrance into the service?

Mr. LA GUARDIA. I did have training, but not sufficient to qualify me as a military flyer.

Mr. LEA. And then you reached France in October. Did you have any work in England before you went to France, and how long did you remain in France before you went to Italy?

Mr. LA GUARDIA. A few days.

Mr. LEA. And you took charge of this training field in Italy?

Mr. LA GUARDIA. One of the fields.

Mr. LEA. What was the name of that field?

Mr. LA GUARDIA. Ovest.

Mr. MAGEE. That was purely an American training field?

Mr. LA GUARDIA. Yes.

Mr. LEA. And how many other American training fields were there in Italy?

Mr. LA GUARDIA. None. We had two fields in the aviation sector.

Mr. LEA. And were you in charge of both of these fields?

Mr. LA GUARDIA. I was in charge of one field, and then later I was in charge of aviation matters.

Mr. LEA. What was your position when you became in charge of aviation matters in Italy?

Mr. LA GUARDIA. Captain.

Mr. LEA. Did you have any superior officer in Italy then?

Mr. LA GUARDIA. Oh, yes; I had Maj. Ryan.

Mr. LEA. What was the general line of your duties in that respect?

Mr. LA GUARDIA. Well, when I first went down I was second in command under Maj. Ryan, and then I was placed in command of this other camp when we opened that. Then, besides that, I had charge at all times of all production matters, so that I made several trips to Paris, France—I think I made about one trip a month.

Mr. LEA. You would carry on the negotiations as to the supplies required for the Italian sectors?

Mr. LA GUARDIA. Yes; and I did for contracts for training.

Mr. LEA. Did the Americans have any training field where men were being trained at the time you reached Italy?

Mr. LA GUARDIA. We had just got one of these fields.

Mr. LEA. You initiated this field?

Mr. LA GUARDIA. No; I think there were 60 men when I got down there.

Mr. LEA. It was at the initial stage?

Mr. LA GUARDIA. Oh, yes.

Mr. LEA. There had not been anything particularly accomplished up to that time?

Mr. LA GUARDIA. None of the boys had received wounds yet.

Mr. LEA. Had the construction work been done?

Mr. LA GUARDIA. It had.

Mr. LEA. That was done on contract with America?

Mr. LA GUARDIA. It was theirs. We paid so much a man for training. They desired to bill us for everything. Then I pointed out to the Italians we could not take away the buildings or the ground or anything like that. So we figured a reasonable value of depreciation of property, actual cost of fuel, actual cost of construction of all planes, and it got down to a basis so that we paid them for each man so much, which was actual cost. The Italian Government did not make a penny off of it.

Mr. LEA. Then we did not acquire title to any fields in Italy?

Mr. LA GUARDIA. No. I did not want to do that. They did that in France, and I did not like the wisdom of it. They wanted to sell me those fields, and I think would have been willing for us to buy them, but I did not want to do it.

Mr. LEA. How far was this from the coast?

Mr. LA GUARDIA. We flew to the coast on our tests. I should say it was about 30 or 40 miles.

Mr. LEA. When you first went over-there, all these Americans were there for training, were they not?

Mr. LaGUARDIA. Yes.

Mr. LEA. There were not any trained fighters there at that time?

Mr. LaGUARDIA. No.

Mr. LEA. How long did it take to qualify the American boys to enter the fight?

Mr. LaGUARDIA. Let us take bombing, because I took a complete course of bombing; and if we had had the machines we could have gotten through in three months for bombing.

Mr. LEA. How long was it before any of them did enter the fight? In other words, when did the Americans first enter the fight on the Italian front?

Mr. LaGUARDIA. Eight months afterwards.

Mr. LEA. And what date was that?

Mr. LaGUARDIA. June.

Mr. FREAR. 1918?

Mr. LaGUARDIA. Yes; I had my first boys decorated July 4.

Mr. LEA. How many of them entered at that time?

Mr. LaGUARDIA. Sixty.

Mr. LEA. Not at once, though, did they?

Mr. LaGUARDIA. Yes, sir.

Mr. LEA. These machines that were used for training purposes were all Italian machines?

Mr. LaGUARDIA. French—foreign makes, the property of the Italian Government.

Mr. LEA. They were procured through the Italian Government?

Mr. LaGUARDIA. Yes.

Mr. LEA. Were all those machines used on the Italian front on a lease?

Mr. LaGUARDIA. Those we used?

Mr. LEA. Yes.

Mr. LaGUARDIA. Oh, no; we used their machines.

Mr. LEA. But, our Government had to pay for the use of them?

Mr. LaGUARDIA. Oh, no; not the front.

Mr. LEA. Did you Americans do your work under the Italian flag; is that the idea?

Mr. LaGUARDIA. We were assigned to Italian squadrons, and I had an American machine, because I made a few speeches in Italy, and the Austrians were anxious to get me, so as to make an example of me.

Mr. LEA. But the work done by the Americans on the Italian front was done in connection with the Italian troops?

Mr. LaGUARDIA. Exactly; the same as our boys operated with the British.

Mr. LEA. So we did not have a separate American air service on the Italian front?

Mr. LaGUARDIA. No, sir.

Mr. LEA. So we simply were giving the Italian Government the benefit of our boys?

Mr. LaGUARDIA. The same as we did the British.

Mr. LEA. So that the Italians were supposed to furnish the machines?

Mr. LaGUARDIA. Oh, yes; and furnish us transportation. We never paid transportation going to or from the front, or going to or

from the schools. The Italian Government always gave us that transportation.

Mr. LEA. So the American contribution was men and subsistence; that was the obligation of America on that front?

Mr. LA GUARDIA. Yes, sir; we had a regiment there.

Mr. LEA. What arrangements were made in reference to the furnishing of these machines; that is, I suppose the Americans went there with this agreement and understanding from the beginning?

Mr. LA GUARDIA. Oh, yes.

Mr. LEA. So there never were any American machines sent there for the Italian service?

Mr. LA GUARDIA. No.

Mr. LEA. When did you leave the Italian service?

Mr. LA GUARDIA. The Italian service?

Mr. LEA. That is, on the Italian front.

Mr. LA GUARDIA. I left there on the 15th of October, I think it was, 1918; I landed on the 1st of November, 1918.

Mr. LEA. Who had charge of the work on the Italian front after you left?

Mr. LA GUARDIA. I turned over the command to Lieut. Frost at the Italian front.

Mr. LEA. He remained until the armistice?

Mr. LA GUARDIA. He remained until the armistice. He is here now. And then when I was relieved, a man in charge of aviation, Maj. Glendenning, succeeded me.

Mr. LEA. By what route did you return to America?

Mr. LA GUARDIA. France and Italy.

Mr. LEA. Did you take in the front in France on your return?

Mr. LA GUARDIA. No.

Mr. LEA. You came directly home?

Mr. LA GUARDIA. Yes.

Mr. LEA. Did you finally have any flight over there in these machines the Americans furnished?

Mr. LA GUARDIA. No.

Mr. LEA. Did you visit the front in France on your return?

Mr. LA GUARDIA. No, sir.

Mr. LEA. You came directly home?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Now, did you personally have any experience over there in flying any of these machines that America furnished?

Mr. LA GUARDIA. No.

Mr. LEA. Now, the machines used by the Americans in France, the training planes, were procured over there, I suppose, in France.

Mr. LA GUARDIA. Not the American planes.

Mr. LEA. They were French planes?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. And were all the machines you had over there for training and other purposes of foreign make?

Mr. LA GUARDIA. They were of foreign make, except those De Havillands that I mentioned before.

Mr. LEA. How many were there of those?

Mr. LA GUARDIA. I gave you that; in September, we had two squadrons; in October we had four squadrons.

Mr. LEA. How many to a squadron?

Mr. LA GUARDIA. Eighteen machines.

Mr. LEA. Did you have any opportunity for personal observation of the aircraft's actual work in France?

Mr. LA GUARDIA. In France?

Mr. LEA. Yes; that is, on the front.

Mr. LA GUARDIA. No.

Mr. LEA. Now, had you had any technical experience in engine matters before you entered the service?

Mr. LA GUARDIA. No.

Mr. LEA. Now, all the information you had is from the operation of these machines——

Mr. LA GUARDIA (interposing). And, of course——

Mr. LEA (continuing). And the conduct in the air and flying?

Mr. LA GUARDIA. And my education in this work for 15 months. Of course, a man must be a terrible dope if he did not learn anything in that time; his life is right up against it all that time.

Mr. LEA. Now, this material that you procured in Spain was in effect a substitute for material—permitted to be a substitute—that America was to supply.

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Now, they did not fully keep the terms that America had made?

Mr. LA GUARDIA. No, sir.

Mr. LEA. As I understand you, that was due to the shipping conditions?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. So America was not guilty of breach of good faith?

Mr. LA GUARDIA. Oh, it was not a lack of good faith at all.

Mr. LEA. So nobody is to blame for the failure——

Mr. LA GUARDIA (interposing). Except the failure to have the ships; that is, as to the raw material.

Mr. LEA. But it was not a willful failure to furnish it?

Mr. LA GUARDIA. No. The Italians felt that in the allocation of ships they did not receive enough tonnage.

Mr. FREAR. I suppose they all felt that way. You were rather proceeding without express authority to carry out our understanding?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. I thought he was reflecting on somebody for not furnishing that material.

Mr. FREAR. Not at all.

Mr. LA GUARDIA. Oh, no.

Mr. LEA. Now, do you know what the condition of preparation for the Air Service was for Italy, France, and England, as compared to the United States at the beginning of the war?

Mr. LA GUARDIA. When the war broke out?

Mr. LEA. What I mean is, when the war broke out originally.

Mr. LA GUARDIA. Well, when the war broke out originally no one of the countries had machine guns in their planes; they would come over each other's territories for observations and later on take photographs and greet each other as they passed in the air.

Mr. LEA. They were not fighting planes?

Mr. LA GUARDIA. No, sir. And later some took revolvers with them, and later on they put machine guns in them and started to

fighting. Let me follow that up, please. They had flyers and they had planes. This was in 1914. In 1914 we had approximately less machines than they had, in 1914.

Mr. LEA. Do you happen to have the figures available?

Mr. LA GUARDIA. No; I have not. But from 1914 to 1917 they developed wonderfully in the war; but we stood idly by in the three years and did not have a thing, so that in 1917 when we declared war, or in 1916, when we had the mix-up on the border, we did not have anything.

Mr. LEA. You don't know how much they had to start with?

Mr. LA GUARDIA. No; I don't know exactly.

Mr. LEA. Did you ever learn how much Germany had to start with?

Mr. LA GUARDIA. She had more than France, I believe, in the way of flying machines.

Mr. LEA. I have understood that Germany had something like a thousand at the beginning of the war in 1914?

Mr. FREAR. I think that all appears in Mr. Crowell's book on munitions, and we will put that all in before we start out.

Mr. LEA. Do you know how many we had when we entered the war in 1917? Did we have anything to use at that time?

Mr. LA GUARDIA. Nothing.

Mr. LEA. Nothing but some in the nature of elementary training machines.

Mr. LA GUARDIA. No, sir; you could not use them at the front.

Mr. LEA. Now, to what extent did the manufacturing for foreign use extend in this country before we entered the war? To what extent had the manufacturing for use in foreign countries been carried on here before we entered the war?

Mr. LA GUARDIA. Quite a bit. Curtiss had quite a big contract for the English Government, shipping machines to that country.

Mr. LEA. Do you know what kind he made?

Mr. LA GUARDIA. Yes; the JN 4.

Mr. LEA. The training planes?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Was that practically the same engine we used?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Where did we get our engines.

Mr. LA GUARDIA. The same source; but I suppose other factories were building them. I was not here, and I do not know.

Mr. LEA. Now, as to the training planes in America, did you have an opportunity to see how nearly the demands were met?

Mr. LA GUARDIA. They were met, is my understanding. I was not here.

Mr. LEA. That was the first step toward training men to take a legitimate part in the war so far as aviation is concerned?

Mr. LA GUARDIA. Oh, I think the men that did the fighting on the other side we trained them from the elementary stage on the other side.

Mr. LEA. But the training was the first step?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. The JN engine answered that purpose?

Mr. LA GUARDIA. The OX 5 with the JN engine.

Mr. LEA. Made in America?

Mr. LaGUARDIA. Yes, sir. I like that for its purpose.

Mr. FREAR. That is the one we recently sold to the Curtiss people?

Mr. LaGUARDIA. Yes, sir: I like that for the purposes for which it is intended.

Mr. LEA. Do you know how many were made during the war?

Mr. LaGUARDIA. Yes; a tremendous lot.

Mr. LEA. Do you know what we used for training?

Mr. LaGUARDIA. What ever was assigned to you. The Hall stock, I think.

Mr. LEA. Do you know how many were made here?

Mr. LaGUARDIA. No; I was not here.

Mr. FREAR. I think that is in the Hughes report.

Mr. LEA. Now, do you know of anything of an understanding of America and the Allies at the beginning of the war as to what countries should make the bombing and fighting planes?

Mr. LaGUARDIA. Why, there was a great deal of talk about an understanding of that kind, but I only had one end of it. I never heard any of the negotiations with the Italian countries.

Mr. LEA. I have heard that talk, but I never got at the correctness of it; I thought you might have it.

Mr. LaGUARDIA. I think Col. Dunwoody would have that, and I think Gen. Patrick would know about it.

Mr. LEA. Was there some understanding at the beginning of the war that England and France were to provide the bombing planes and America the planes for other purposes?

Mr. LaGUARDIA. An official understanding?

Mr. LEA. Yes. I don't know that there was, but I have heard that general talk.

Mr. LaGUARDIA. All I know was this, that the Italian Government was led to believe they could let up on their manufacture of aviation motors——

Mr. FREAR (interposing). What kind of motors?

Mr. LaGUARDIA. That was the trouble. When I delivered the official commitment we promised them the Liberty motor; we promised them 4,500.

Mr. LEA. Do you have that commitment?

Mr. LaGUARDIA. I have a copy of it that I am going to put in the record.

Mr. LEA. Do you know when that was?

Mr. LaGUARDIA. March or April, 1918.

Mr. LEA. I suppose that was still standing when the war ended?

Mr. LaGUARDIA. Yes, sir; but in that contract we contracted to make delivery, and never kept good on it except in the naval motors, as I told you.

Mr. LEA. Do you know how many machines America was furnished by England and France during the war?

Mr. LaGUARDIA. The total number?

Mr. LEA. Yes.

Mr. LaGUARDIA. No, sir.

Mr. LEA. Now, what is your judgment as to what America did accomplish in the Air Service itself—actual accomplishments?

Mr. LaGUARDIA. What we did accomplish?

Mr. LEA. Yes. Did America contribute to any material extent by the Air Service to the winning of the war?

Mr. FREAR. Do you mean production?

Mr. LEA. No; the actual results.

Mr. LA GUARDIA. I think our flyers did.

Mr. LEA. But was it to a material extent?

Mr. LA GUARDIA. That is hardly a fair question to ask me.

Mr. LEA. I know——

Mr. FREAR (interposing). The Secretary of War did not even answer a question as clear as that?

Mr. LA GUARDIA. I think you had better ask Gen. Pershing when he comes. I think he is satisfied with our Air Service.

Mr. LEA. I understand you hesitate because you do not want to comment on your own service?

Mr. LA GUARDIA. On my branch of the service, but I think I can say our work came up to expectations.

Mr. LEA. Leaving out the Italian front, what was the work on the other allied fronts?

Mr. LA GUARDIA. Of our men?

Mr. LEA. Yes.

Mr. LA GUARDIA. Excellent.

Mr. LEA. How did the work compare with the others?

Mr. LA GUARDIA. As fliers?

Mr. LEA. Yes, sir.

Mr. LA GUARDIA. Very favorably.

Mr. LEA. Now, you think that it materially contributed to the success of the winning of the war?

Mr. LA GUARDIA. I think my branch of the service is all right; of course, I do. We used to say we won the war.

Mr. LEA. Then it is a fact that notwithstanding America may have failed in her program, or fallen down in her program of furnishing the engines and machines that it was provided for, yet we were, on account of the engines and machines furnished by other people, able to do our part?

Mr. LA GUARDIA. Yes, sir; but as an American I hate to have to swallow that, because we are the greatest productive people in the world. And that makes it hurt, because when these English boys and the others would say to us, "When are your planes coming over?" "What do you think of this Sopwith?" and so on, I say it hurts.

Mr. LEA. Of course, we have to admit what the real fact is and we have to get at the real situation. Do you know what was the capacity of the Italian factories for motors?

Mr. LA GUARDIA. I can have that in detail for you if you want it; I can not remember it.

Mr. LEA. Suppose you hand it in.

Mr. LA GUARDIA. I have all that in my dope book. By the way, in that connection I tried hard to get a contract for Skeeny motors. Col. Dunwoody approved that, but we could not contract for any motor of that size on account of the production of Liberties.

Mr. LEA. Who determined the American policy so far as France or oversea work was concerned?

Mr. FREAR. The policy, how?

Mr. LEA. Here is what I am getting at: The evidence or suggestions indicate that every once in a while a telegram would come, "This is

right," or "This is wrong." Now, who was responsible for those telegrams advising the American side of military affairs what to do?

Mr. LA GUARDIA. In production matters of that kind I think most matters went through Col. Dunwoody first, and Gen. Patrick, and then Gen. Short for a long time, Gen. Deloy, and Gen. Kennedy, and Gen. Bolling.

Mr. LEA. And then if a telegram was signed by Pershing, it originated from that part of the service?

Mr. LA GUARDIA. Yes; but I want to disavow responsibility for the telegram sent not to manufacture Spads, because I think that was never the policy of our Air Service.

Mr. FREAR. Has that ever been traced up?

Mr. LA GUARDIA. No, sir; not to my knowledge.

Mr. FREAR. Never has been to this date?

Mr. LA GUARDIA. No, sir.

Mr. FREAR. I see Mr. Hughes in his report mentions that.

Mr. LA GUARDIA. Yes, sir. Gen. Pershing signed it, but he never saw it.

Mr. LEA. As a matter of fact, you have to hold him responsible; it came in his name.

Mr. LA GUARDIA. No.

Mr. LEA. You have to hold him responsible for it?

Mr. LA GUARDIA. No.

Mr. LEA. Here is the view I take of it. Here is a telegram from Gen. Pershing through official sources. Now, have you any specific information to make that assertion?

Mr. LA GUARDIA. I have this, that knowing the routine of such cablegrams I am safe to say that Pershing knew nothing about that cablegram. There were a thousand a day, and they went on referring to paragraph so-and-so, and they would come to the Air Service, and we would have a number of different paragraphs, and at the end of this it is signed "Pershing."

Mr. LEA. Yes; I concede that, but until there is a specific explanation of this telegram you must assume that Pershing is responsible for it. If there is an explanation, and somebody else is responsible—

Mr. FREAR (interposing). The testimony of Maj. Muhlenberg that I have read into the record shows that on an average 40 cablegrams were received every day.

Mr. LEA. So what you say is on your knowledge of the system?

Mr. LA GUARDIA. Based on the knowledge of the system, custom, and so on.

Mr. LEA. And not on the circumstances; it is immaterial to me, but I want to get at the responsibility.

Mr. LA GUARDIA. I don't think it is fair to say that Pershing knew anything about it; I am sure he did not.

Mr. LEA. Now, you don't have any specific information with relation to that order revoking the Spad order, do you?

Mr. LA GUARDIA. Excepting that the officer who sent that cable never explained it to my satisfaction.

Mr. LEA. Did he talk to you personally?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. What officer was that?

Mr. LA GUARDIA. Col. Gorrell.

Mr. LEA. You were in Italy at that time, were you?

Mr. LaGUARDIA. On that date?

Mr. LEA. Yes.

Mr. LaGUARDIA. I don't know what day it was sent; I was in Paris awhile.

Mr. LEA. Of course, you were not in touch with the particular situation?

Mr. LaGUARDIA. No, sir.

Mr. LEA. Now, you spoke about—that no one could do any better and not ship any motors?

Mr. LaGUARDIA. Yes.

Mr. LEA. Who was that?

Mr. LaGUARDIA. Col. Dunwoody.

Mr. LEA. The colonel here?

Mr. LaGUARDIA. Yes.

Mr. LEA. Those two engines, what was the reason it could not be tested?

Mr. LaGUARDIA. The crank case, and defective bearings; they had two different metals on the bearings, didn't they?

Col. DUNWOODY. The metals they used on the bearings surface crystallized.

Mr. LaGUARDIA. They could not use them at all for the test.

Mr. LEA. Your information on that was received from Col. Dunwoody?

Mr. LaGUARDIA. Yes; and other sources.

Col. DUNWOODY. That was not the fault of the engine proper, but of packing, and so on.

Mr. LEA. Now, how was it that England with the help of the Americans that it had in its factories and having been in the war three years before we entered could not furnish us more engines?

Mr. LaGUARDIA. Because she had a tremendous air service to furnish herself.

Mr. LEA. Do you know what the capacity of the English factories was?

Mr. LaGUARDIA. No.

Mr. LEA. They were not able to supply us, however. Do you think they had all that they could be expected to do?

Mr. LaGUARDIA. And keep up their own forces?

Mr. LEA. Yes, sir.

Mr. LaGUARDIA. I certainly do.

Mr. LEA. Were you in touch with the English situation so far as the other supply of the aircraft was concerned on the front?

Mr. LaGUARDIA. On our front?

Mr. LEA. Yes; on the Italian front.

Mr. LaGUARDIA. Yes, sir.

Mr. LEA. But not in the other sections?

Mr. LaGUARDIA. No.

Mr. LEA. Do you know whether their supply was sufficient for their needs?

Mr. LaGUARDIA. Oh, they did give us some machines, you know.

Mr. FREAR. For their needs?

Mr. LaGUARDIA. It must have been, because they gave us some machines.

Mr. LEA. Do you happen to know how many they had in the war?

Mr. LA GUARDIA. The exact figures?

Mr. LEA. Yes.

Mr. FREAR. An interesting question would arise right there, the question that we were employed in England on the Handley-Paige.

Mr. LA GUARDIA. They were not on the Handley-Paige but all over England.

Mr. FREAR. In helping England on her production?

Mr. LA GUARDIA. Yes.

Mr. LEA. Now, as I understood, I may not be right, but as I understand, American boys were sent into the English factories to give them a more intimate knowledge of motors, so that they could go to France and give the Americans the benefit of their skill?

Mr. LA GUARDIA. Yes; and it would not work out right.

Mr. LEA. They engaged in the actual service?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Did America get any benefit of their work in the English factories? That is of the production after they assisted in England; did America get any assistance or reward?

Mr. LA GUARDIA. For their labor?

Mr. LEA. Yes.

Mr. LA GUARDIA. I don't think that was deducted; I don't know.

Mr. LEA. Did we get any extra product on account of their labor?

Mr. LA GUARDIA. No; because they went into the factory at the time England took out men who were therefore exempt on industrial reasons, and I think they replaced men that went into the army.

Mr. LEA. Into the English Army?

Mr. LA GUARDIA. Yes; that is very interesting and I will go into that and examine who actually handled that.

Mr. LEA. However, as I understand it, the suggestion in that line is not proper that England failed to perform any duty to this country on that line?

Mr. LA GUARDIA. Oh, no.

Mr. LEA. The countries were cooperating all the way through?

Mr. LA GUARDIA. Yes; I think England was magnificent all the way through.

Mr. LEA. This priority of men coming across, would you explain that a little more in detail? I am not familiar with that.

Mr. LA GUARDIA. Yes; after the drive, I think at Cambria, the English retreated. Things were pretty blue then; they gave us more ships to carry troops over; they were carrying men for us, and it was understood we were sending only infantrymen.

Mr. LEA. To the front?

Mr. LA GUARDIA. Yes, sir; right to the front. We were not to send noncombatant troops at all; only fighting men.

Mr. LEA. Do you remember the date of that drive again?

Mr. LA GUARDIA. No, sir; I think it was in March. So we could not replace these men at all. They were there a long time you know, Mr. Lea.

Mr. LEA. Now, how long had the war advanced—that is, going back to the beginning—before our allies began production of these heavier planes?

Mr. LA GUARDIA. The bombing planes?

Mr. LEA. Yes; the bombing planes?

Mr. LA GUARDIA. The first raids with airships, you mean?

Mr. LEA. You mean dirigibles?

Mr. LA GUARDIA. Yes; and then they raided Paris in the daytime at the beginning of the war with airships. I think that the first bombing planes was about two years afterwards; but I may be wrong in my memory of that.

Mr. LEA. You think that the war had advanced two years before there was any bombing planes?

Mr. LA GUARDIA. Effective bombing?

Mr. LEA. Yes, sir.

Mr. LA GUARDIA. Yes.

Mr. LEA. Germany initiated that bombing?

Mr. LA GUARDIA. Yes; I am sure I am right about that.

Mr. LEA. Germany began the bombing with planes on an undefended city?

Mr. LA GUARDIA. Yes, sir; Paris was an easy target—they followed the river right down.

Mr. LEA. Do you recall how long it was after that before the Allies were able to retaliate with the bombing planes?

Mr. LA GUARDIA. No. Caproni tells me he was ready the latter part of 1915.

Mr. FREAR. With a bombing plane?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. You spoke with reference to this Caproni plane being largely handmade.

Mr. LA GUARDIA. No; the Skeeney motor; she is a dandy.

Mr. LEA. Now, what is the superiority of handwork over machine work?

Mr. LA GUARDIA. Oh, I don't know.

Mr. LEA. What is the reason for handwork rather than machine work?

Mr. LA GUARDIA. Well, I think it is the old school more than anything else.

Mr. LEA. Is machine work carried on in England more expensively than in America?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Is that to avoid the factory expense and to get cheaper labor?

Mr. LA GUARDIA. Yes; it was cheaper at that time. In Italy they made the biggest mistake; the best men went into the war right off, and the best men were killed off, and she found herself in a predicament afterwards for factory men.

Mr. LEA. The Italians showed great skill in the manufacture of aircraft?

Mr. LA GUARDIA. Yes, sir; they had bad politics, however, in their industry.

Mr. LEA. Their Government was in bad shape at the beginning of the war?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Torn up by dissension?

Mr. LA GUARDIA. Yes, sir; bad politics and butting into industrial problems.

Mr. LEA. Now, that Selfridge Field was secured by lease, as I understand?

Mr. LA GUARDIA. Yes, sir.

Mr. LEA. Do you know anything about the value of the improvements on it?

Mr. LA GUARDIA. It was in the millions, I suppose.

Mr. LEA. That was in barracks, and so forth.

Mr. LA GUARDIA. Pumping and drainage.

Mr. LEA. And that is near what city?

Mr. LA GUARDIA. Detroit. I may be wrong; if I am you will permit me to correct the record, won't you? I am quite sure it is Detroit.

Mr. LEA. As I understand there are two fields at Dayton?

Mr. LA GUARDIA. Yes.

Mr. LEA. One of which the Secretary proposes to retain, and buy the other?

Mr. LA GUARDIA. No, sir; he wants to release the one to buy the others.

Mr. LEA. He wants to release the one until 1927?

Mr. LA GUARDIA. Yes, sir; and sell the others.

Mr. LEA. Has the other ever been returned to the private people?

Mr. LA GUARDIA. We never had it. The Dayton-Wright people have it.

Mr. LEA. For what purpose was it used during the war?

Mr. LA GUARDIA. It was used for a factory.

Mr. LEA. Does the Secretary of War recommend the retention of that field for a factory or experimental purposes?

Mr. LA GUARDIA. For experimental purposes.

Mr. LEA. About the sale of these aeroplanes, as I understood the Secretary of War when he was before the committee a few days ago, he said it was the policy of the War Department to secure the full amount to individuals; that they fully understood the value of having individuals possess these machines, and that they were giving individuals an opportunity to buy the machines at \$400, about twice what they charge the Curtiss people, but that they had the privilege of selecting the machine.

Mr. LA GUARDIA. Mr. Lea, I fear you misunderstood the Secretary.

Mr. LEA. He said that was the policy.

Mr. LA GUARDIA. No; I think he said he realized that was desirable. If anybody said that the permanent policy of the War Department is to sell machines to individuals for \$400 he stated what is incorrect, I think.

Mr. MAGEE. That is what the Secretary of War said yesterday, as I understood.

Mr. LEA. Yes; I complained to the Assistant Director of Sales, and he informed me that individuals could buy them.

Mr. FREAR. What is his name?

Mr. LEA. Mr. Morse.

Mr. LA GUARDIA. I will state this, that there has not been one machine sold to an individual.

Mr. MAGEE. That is as I understood it, and that is the reason the statement of the Secretary was impressed on my mind.

Mr. LA GUARDIA. I want to make that very plain. That is why I introduced my resolution for an inventory, and that is why I attacked the Curtiss contract.

Mr. MAGEE. The statement of the Secretary of War is in the evidence, and my memory of the statement accords with Mr. Lea's.

Mr. LEA. That is the way I understood it, and I think that the boys that flew over there should have the opportunity of buying the machines.

Mr. LA GUARDIA. You have the two statements, and I beg the committee to investigate. I begged the Secretary to rescind that last contract.

Mr. MAGEE. Do you know, major, whether that contract has been carried out?

Mr. LA GUARDIA. It is being carried out; they are delivering every month.

Mr. MAGEE. Do you know to what extent it is being carried out? I mean for the resale of these machines?

Mr. LA GUARDIA. It was executed on the 24th of April. They had three months deliveries at \$75,000 worth a month.

Mr. MAGEE. More than three months passed since April.

Mr. LA GUARDIA. No; May, June, and July.

Mr. MAGEE. What about August?

Mr. LA GUARDIA. We haven't got into August yet. I am talking about deliveries.

Mr. MAGEE. This is the second day of August?

Mr. LA GUARDIA. You could not have delivered many on yesterday. They are taking them as fast as they can get them.

Mr. MAGEE. You do not know what contracts are back?

Mr. LA GUARDIA. No; but I can find out.

Mr. MAGEE. It would not be feasible to stop contracts as far as not executed.

Mr. LA GUARDIA. Section 15 provides for deliveries.

Mr. FREAR. The Spad contract was placed, and then canceled, and then after a period of several months it was again put in force; that is true, isn't it?

Mr. LA GUARDIA. After several months it was again put in force, that is true. But my knowledge is only from reading the testimony of the Senate committee.

Mr. FREAR. The order was for 1,000 Spads, and none ever reached the front?

Mr. LA GUARDIA. No, sir. You will recall that the testimony before the Senate committee was: Why not take Libertys instead of Spads?

Mr. LEA. Nobody on this side is responsible for the order revoking the contract to manufacture Spads.

Mr. LA GUARDIA. That I do not know.

Mr. FREAR. They were responsible for the order because the order from here stopped the Curtiss planes.

Mr. LEA. I mean, it was based upon a cablegram from the other side.

Mr. LA GUARDIA. Frequent conferences showed we needed Spads.

Mr. FREAR. And after it was driven home to them they gave the order again. The original order was for 3,000, which was canceled and the subsequent order was for 1,000.

Mr. LEA. The responsibility attaches to somebody over there.

Mr. FREAR. Somebody over there probably sent a cablegram, but it was such a vital question at the start that it should have been seen to. Col. Clark, who went over, according to testimony placed in the record on yesterday, when he came back urged us to manufacture

three airplanes of foreign design, one of two English that he referred to, one French and one Italian—or rather he urged that by cable before he came back, and then when he came back he again urged it. And further testimony is that none of these machines was ever put in process of manufacture. That is the testimony of Col. Clark.

Now, Mr. LaGuardia, I want to ask you a word about your decoration?

Mr. LaGUARDIA. I do not want to talk about that.

Mr. FREAR. Well then, about your boys?

Mr. LaGUARDIA. We got our men into action the first day we got the planes, in the early part of June, and five of our men had earned war crosses by July.

Mr. FREAR. By reason of their work over there?

Mr. LaGUARDIA. Yes, sir. They were decorated on the 4th day of July by the King of Italy. I think I had about 20 or 25 of my boys afterwards decorated by the King of Italy.

Mr. FREAR. You need not answer if you prefer not to do so, but did you succeed in getting a decoration, among the 25 or 26 boys you refer to?

Mr. LaGUARDIA. They were generous to me, perhaps charitable.

Mr. FREAR. Whether you deserved it or not?

Mr. LaGUARDIA. Yes.

Mr. FREAR. I happen to know something about that, and I guess you got it by earning it all right.

The fighting machine in Italy was what?

Mr. LaGUARDIA. They used the Hennoit and the Spad.

Mr. FREAR. And what about the French?

Mr. LaGUARDIA. Their own Ballila. And the SPA, although the observation machine is a little scrapper.

Mr. FREAR. Have you ever used the De Haviland 4?

Mr. LaGUARDIA. No, sir.

Mr. FREAR. You have not ridden in that?

Mr. LaGUARDIA. No.

Mr. FREAR. You want to be sure of your present whereabouts, and therefore you have not ridden in the De Haviland 4?

Mr. LaGUARDIA. I would rather not state for the record what I think about it.

Mr. FREAR. This Government, when it entered the war, had the benefit of the experience of England, France, and Italy, through two years and a half of war—

Mr. LaGUARDIA (interposing). Yes; and of Germany.

Mr. FREAR. And the experience of Germany and Austria?

Mr. LaGUARDIA. Yes; because we had observers there.

Mr. FREAR. We had the experience of those countries for two and a half years before we entered the war?

Mr. LaGUARDIA. Yes, sir.

Mr. FREAR. I speak of that because the Secretary of War testified before this committee on yesterday, I think, that at the beginning of the war we had two or three hundred training planes on the Mexican front.

Mr. LaGUARDIA. How many?

Mr. FREAR. Two or three hundred.

Mr. LaGUARDIA. On the Mexican front?

Mr. FREAR. Oh; it was only 26, I believe, wasn't it?

The REPORTER. He said 16, as I recall.

Mr. FREAR. Well, I will make that modification. How many did he have afterwards?

Mr. LA GUARDIA. I know about the Mexican situation, but as that is an army matter, under the present circumstances I would rather not discuss that for the record.

(And at this place there was considerable discussion outside of the record.)

Mr. FREAR. The committee will now adjourn until Monday morning at 10 o'clock.

(And at 12.45 o'clock, p. m., the committee adjourned until Monday morning, August 4, 1919, at 10 o'clock a. m.)

SUBCOMMITTEE NO. 1 (AVIATION) OF THE
SELECT COMMITTEE ON EXPENDITURES IN THE
WAR DEPARTMENT, HOUSE OF REPRESENTATIVES,

Monday, August 4, 1919.

The subcommittee met at 10.30 o'clock a. m., pursuant to adjournment on Saturday, Hon. James A. Frear (chairman), presiding. Also present: Hon. Walter W. Magee and Hon. Clarence F. Lea.

**TESTIMONY OF COL. (MAJOR GENERAL DURING THE WAR)
MASON M. PATRICK, ENGINEERS, UNITED STATES ARMY.**

The witness was duly sworn by Mr. Frear.

Mr. FREAR. Give your full name for the benefit of the record.

Col. PATRICK. Mason M. Patrick.

Mr. FREAR. You are a general in the United States Army?

Col. PATRICK. I was a major general and Chief of the Air Service, American Expeditionary Forces, but am now a colonel in the Corps of Engineers.

Mr. FREAR. You were a major general in Europe, and were the Chief of the Air Service of the American Expeditionary Forces?

Col. PATRICK. Yes, sir.

Mr. FREAR. How long have you been in the Army?

Col. PATRICK. Thirty-seven years, very nearly, sir.

Mr. FREAR. Will you please state to the committee, in your own way, your connection with the Aviation Service, and just what occurred in your experience and from your observations while connected with the Signal Corps of the Army, in aviation work. Or would you prefer that we should ask you questions?

Col. PATRICK. I shall be glad to give it to you in a direct statement, or by answering questions, as the committee may desire.

Mr. FREAR. Take your own time and state it in your own way.

Col. PATRICK. After having been in France for nearly 10 months, during which time I was in charge of all construction work, I was summoned by the commander in chief, in the early part of May, 1918, and told by him that he intended to appoint me Chief of the Air Service of his Army—

Mr. FREAR (interposing). Let me ask you: When did you go to Europe?

Col. PATRICK. I sailed from New York on the 7th of August, 1917, and landed in France the 20th of August, 1917.

Shortly after this interview with the commander in chief an order was issued designating me as Chief of the Air Service—

Mr. FREAR (interposing). And that was from what date?

Col. PATRICK. I will have to trust to my memory, but I think it was the 29th of May, 1918. At that time we had done scarcely anything in the air. The commander in chief at the same time told me that he did not desire to make any separation of his air service into two parts. And I might say, by way of explanation right there, that that had been discussed at one time.

Mr. FREAR. That was the Signal Corps?

Col. PATRICK. No; that was with reference to having one section charged merely with supply and the other section charged with operations on the front. He said he preferred to hold me responsible for all the operations and the supply; that officers under me would be designated to handle these different functions, but the responsibility was mine.

Mr. FREAR. The commander in chief was Gen. Pershing?

Col. PATRICK. Yes, sir. At that time the Air Service was almost a negligible quantity. We had practically only two or three squadrons, three, I think, operating—

Mr. FREAR (interposing). That was in May, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. How many airplanes were there in a squadron?

Col. PATRICK. The number differed according to conditions and at different times, but I think we may safely say that the average number of airplanes in a squadron with us was 20. The Germans, and the French, and the English used a lesser number. But I think we may safely say that we had 20 on an average.

Now, Mr. Chairman, we were confronted by a great many difficulties—difficulties in the matter of obtaining supplies; difficulties in the matter of obtaining properly trained personnel. We were in touch with the United States concerning the production program here, and were reasonably familiar, we thought, with what could be supplied.

About that time the Senate committee, if I recollect aright, was investigating certain Air Service affairs here—

Mr. FREAR (interposing). That was the Thomas subcommittee?

Col. PATRICK. Yes, sir. I remember that I procured a copy, or at least saw a copy, of a part of their report, in which, among other things, they said, owing to the delay in the production program in the United States—which was quite evident—that we had to obtain from European sources such material as we could possibly get to eke out until our own came through. I had been convinced of the truth of that before I read that report, and had taken steps already—

Mr. FREAR (interposing). That statement in the Thomas report was true?

Col. PATRICK. Oh, absolutely true. We did everything we could, with both the French and English, as well as with the Italians, to secure fresh materials to equip our air forces.

Mr. FREAR. In order to get that a little more clearly at this point let me ask: You stated that you had two or three squadrons at the outset, in May. They were equipped with what kind of machines?

Col. PATRICK. Entirely with foreign machines.

Mr. FREAR. What kind of machines would you say, Gen. Patrick, speaking more particularly?

Col. PATRICK. We had one observation squadron at the time that was equipped with Breguet machines, as I recollect, and one equipped with Nieuport or Spads.

Mr. FREAR. The Nieuport or Spad is a fighting machine?

Col. PATRICK. Yes, sir; a pursuit machine—one-place pursuit machine.

Mr. FREAR. We had one squadron equipped with those—

Col. PATRICK (interposing). Having a suggestion by my assistant, Col. Gorrell, let me change that: Some were equipped with two-place Spad machines, and one which we called AR machines, which were two-place machines.

Mr. FREAR. That was in May, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. At that time the Spad was equipped with—

Col. PATRICK (interposing). The two-place Spad was an observation machine.

Mr. FREAR. And the single Spad was a fighting machine?

Col. PATRICK. We had no single-place Spads at that time. We were using Nieuports.

Mr. FREAR. The Nieuport was the only fighting machine you had at that time?

Col. PATRICK. Yes, sir.

Mr. FREAR. That was a French machine?

Col. PATRICK. Yes, sir.

Mr. FREAR. Go ahead.

Col. PATRICK. Early in May, and before I took charge, we had made a contract with the French Government by which it agreed to turn over to us material as it was available and as we needed it, the prices to be paid therefor to be precisely the same as those that were paid by the French Government.

Mr. FREAR. For what?

Col. PATRICK. For aviation material of any kind which they might furnish to us. This was a very satisfactory working arrangement, and the French did their utmost to live up to it.

Mr. FREAR. For how long a period did that contract last?

Col. PATRICK. That endured until the armistice.

Mr. FREAR. To the close of the war?

Col. PATRICK. Yes, sir. And it was under that same agreement that I settled with the French for materials in process of manufacture when hostilities ceased.

During the summer of 1918 we made every effort, both as to securing personnel and material, to equip squadrons to send them to the front. But materials from the United States did not begin to arrive in quantity until July—

Mr. FREAR (interposing). July, 1918?

Col. PATRICK. Yes, sir. They sent then merely the DH-4 planes, equipped with Liberty engines, the only type that was manufactured here at the time.

And let me say right here that it was decidedly a wise conclusion that the United States should not attempt, at that time, to manufacture any single-place machines.

Mr. FREAR. That was your conclusion?

Col. PATRICK. That is my firm conviction.

Mr. FREAR. Then why did we order at the outset the Spad machines?

Col. PATRICK. That was long before I took charge, and I do not know about that. Do you mean an order over here?

Mr. FREAR. Yes, sir.

Col. PATRICK. I did not have any connection with that.

Mr. FREAR. Why do you say it was wise we did not take up the manufacture of other machines in order to provide ourselves with the different types of machines that were needed?

Col. PATRICK. Because the types were changing rapidly.

Mr. FREAR. Did not we use Spads up to the end of the war?

Col. PATRICK. We used improved Spads, but better Spads were coming out all the time.

Mr. FREAR. That is very true, but we had to have machines to meet the situation; and did we have any fighting machines on the front until the DH-4 came over?

Col. PATRICK. We had no American machines of any kind.

Mr. FREAR. Your conclusion is, if I understand you right, that it was better for this Government to expend all its energies on the DH-4 with the Liberty motor, rather than go on at the same time and attempt to provide other fighting machines that were recognized and in use in France and on the fighting border down in Italy. Is that true?

Col. PATRICK. Yes, sir.

Mr. FREAR. Then you think we ought to have laid down at that time, as we apparently did, and have devoted all our energies to the development of a motor that you over in Europe and the people here knew nothing about? That is right, is it? And that was not perfected until what time?

Col. PATRICK. The DH-4, as I stated, with Liberty motors began to come over in quantity in July, 1918.

Mr. FREAR. You have given us your opinion—which was, of course, not asked for—but inasmuch as you have given it I want to find out the basis on which you reached that conclusion.

Col. PATRICK. All right.

Mr. FREAR. And here was the condition of affairs: There was no fighting machine in Europe of American manufacture?

Col. PATRICK. Yes, sir.

Mr. FREAR. And yet your opinion is that this Government, with all of its possibilities for manufacturing the various machines then in use, should have concentrated all its efforts upon one machine and one engine; is that true? Do you mean to be understood that way, that it should ignore every other machine?

Col. PATRICK. No, not quite that way. I mean to be understood this way: That they should have concentrated their efforts on observation and bombing planes, which were more suitable in their types than single-place fighting machines. That is all.

Mr. FREAR. Do you mean to say that we should not have manufactured any single-place fighting machines?

Col. PATRICK. At that time I think not.

Mr. FREAR. Were we getting enough of them from other countries?

Col. PATRICK. Yes, sir.

Mr. FREAR. That is not the testimony before us and we want to get the information.

Col. PATRICK. We were getting enough from other countries, and we had arrangements made to get all we needed, from other countries, to supply all of the fighting forces we expected to put in the field.

Mr. FREAR. How many aviators did you have at the front at that time?

Mr. LEA. Will you excuse a suggestion right there, Mr. Frear?

Mr. FREAR. Certainly.

Mr. LEA. Suppose you just let Gen. Patrick go ahead and make his statement, uninterrupted, and then let us ask him any questions that may occur to us as necessary to clear up matters.

Mr. FREAR. That is all right, but Gen. Patrick made a statement and I wanted to clear that up.

Mr. LEA. I think we would get the matter more clearly before the committee and for the purposes of the record if you would just let Gen. Patrick state what he has to say in his own way, and we may make notes of such things as we want to interrogate him on, and then they can be cleared up when he finishes. In that way he would not have his trend of thought disturbed.

Mr. FREAR. I do not want to disturb Gen. Patrick.

Col. PATRICK. You will not disturb me.

Mr. FREAR. I want to get at the facts as they come before us.

Mr. MAGEE. This DH-4 was not a fighting machine, was it?

Col. PATRICK. Not properly so described, no. That is not what we call a fighting machine. It was an observation or bombing machine.

Mr. FREAR. Go ahead.

Mr. MAGEE. Let me finish that right there. I understood the Secretary of War to say that when the armistice was signed, on November 11, 1918, we did not have any fighting machine forces in the service?

Col. PATRICK. I beg your pardon, sir, but I did not catch that question.

Mr. MAGEE. I understood the Secretary of War to state in his testimony that on November 18, 1918, when the armistice was signed, we did not have any fighting or bombing machines, any forces of that kind, in the service?

Mr. FREAR. None of American make.

Col. PATRICK. The statement of the Secretary of War is quite correct, with this exception, that we were using these DH-4's as bombing machines.

Now, Mr. Frear, I think I can answer your question.

Mr. FREAR. All right; go ahead.

Col. PATRICK. I see from my papers here, on the 1st of July, 1918, the French had 945 pursuit, 1,440 observation, 225 day bombardment, and 210 night bombardment planes, making a total of 2,820 planes in the French Air Service on the 30th of July, 1918.

Mr. FREAR. Did they have aviators sufficient for those planes?

Col. PATRICK. Yes.

Mr. FREAR. Did they have aviators more than sufficient for all those planes?

Col. PATRICK. They were training more, and they expected to put more in the field—and I think their expectations would have been realized.

Mr. FREAR. What was the condition of the enemy at that time, of the Germans, so far as their strength was concerned, on any date that you may have?

Col. PATRICK. The Germans had 1,080 pursuit planes, 1,290 observation planes, no day bombardment planes, 220 night bombardment planes, or a total of 2,592 planes all told. It will be noted that the French alone had more planes than the Germans.

Mr. FREAR. Was the strength in air service then with the Allies, at that time, July 30, 1918, or with the enemy?

Col. PATRICK. The Allies had a preponderance of air strength at that time.

Mr. FREAR. Counting the other service as well.

Col. PATRICK. Counting all the Allies.

Mr. FREAR. Will you give the British planes at that time?

Col. PATRICK. At that time the British had 911 pursuit planes, 390 observation planes, 194 day bombardment planes, and 169 night bombardment planes, making a total of 1,660 planes.

Mr. FREAR. Were the British preparing other aviators, so that they would have other men to take the air service?

Col. PATRICK. Yes, sir.

Mr. FREAR. Were they waiting for planes at that time, or do you know?

Col. PATRICK. That is a rather difficult question to answer, Mr. Frear, about any service—

Mr. FREAR (interposing). Let me explain the reason for asking that question, and you will get the relation: You have made the statement that they began furnishing this Government with planes at that time. What the committee desires to know is, if those various Governments had use for their planes themselves; that is, were they able to man their planes, so that when they were furnishing planes to us they were taking away from their own supply?

Col. PATRICK. No, sir; they were not taking away from their own supply. The French Government greatly increased their production of planes in order to meet our demand, and they were prepared to supply our demands in addition to any probable demand they might make in manufacture.

Mr. FREAR. And supply all our demands?

Col. PATRICK. Practically all our demands, for all types of planes.

Mr. FREAR. You have given us the British, the German, and French planes in the air service as of that time. How many did the Americans have?

Col. PATRICK. At that particular date we had 126 pursuit planes, 126 observation planes, 18 day bombardment planes, no night bombardment planes, a total of 270 planes.

Mr. FREAR. Where had we gotten those planes, from the French?

Col. PATRICK. We had gotten those planes, or practically all of them, from the French.

Mr. FREAR. That was on July 30, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. Now, continue on from that time and let us know the progress. Or, first, did the Belgians have any planes—Mr. Lea has suggested that question to me.

Col. PATRICK. Yes; the Belgians had very few, but I have a record of that, too. The Belgians had 45 pursuit planes, 104 obser-

vation planes, and 10 night bombardment planes, or a total of 160 planes.

Mr. FREAR. I will ask you, if you please, to furnish the committee with the statements which you have there; that is, with those figures, that we may insert them in the record, either now or later on.

Col. PATRICK. All right.

Mr. FREAR. By the way, Mr. Lea reminds me, did Australia and Canada have any?

Col. PATRICK. They were included with the English.

Mr. FREAR. Have you the figures as to the Austrians?

Col. PATRICK. Yes, sir; I have the figures for both the Austrians and the Italians.

Mr. FREAR. All right; we would like to have them.

Col. PATRICK. The Austrians had 450 pursuit planes, 200 observation planes, 67 night bombardment planes, or a total of 717 planes.

As to the Italians, they had 282 pursuit planes, 277 observation planes, 8 day bombardment planes, 47 night bombardment planes, or a total of 614 planes.

Mr. FREAR. The Austrians at that time appear to have largely outnumbered the Italians in pursuit planes?

Col. PATRICK. Apparently; yes.

Mr. FREAR. Were there any other planes in use on the other side than those you have described, as far as you remember?

Col. PATRICK. I think not.

Mr. FREAR. That substantially covers the entire airplane situation?

Col. PATRICK. Yes, sir; that gives the combined allied planes as 5,528, and the combined enemy planes at a total of 3,309.

Mr. FREAR. That was on the 30th of July, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. Then at that time we were in the preponderance as to planes?

Col. PATRICK. Yes, sir.

Mr. FREAR. Where were those planes distributed?

Col. PATRICK. All along the western front, the enemy planes, of course; and the British, French, and our own were likewise distributed along what is known as the western front.

Mr. FREAR. Were they all on the front, or were some of the planes protecting Paris and other points, or where were they located, if anywhere else?

Col. PATRICK. I can not tell you the specific location of the planes; this is the total that we had. They were used indiscriminately, if I may so refer to them—wherever needed.

Mr. FREAR. Were they used in England to protect London, for instance?

Col. PATRICK. This total I have here refers simply to the planes on the front. They were not home-defense planes, not planes used in the defense of Paris, nor does it count any of the German planes kept by them defending cities along the Rhine.

Mr. FREAR. Those were planes on the front?

Col. PATRICK. Yes, sir.

Mr. FREAR. What was the strength of planes the month before that, have you that information?

Col. PATRICK. No, sir.

Mr. FREAR. Where did you get the figures in regard to German planes, and in regard to Austrian planes, and other planes belonging to other nations?

Col. PATRICK. The figures of German planes came from the French Aerial Bulletin No. 20, issued in July, 1918. The secret service of both the French and the English, and of our own ultimately, gave us a very accurate estimate at least of the enemy forces.

Mr. FREAR. You believe that those figures are substantially correct?

Col. PATRICK. I believe those figures are as nearly correct as it is possible to obtain.

Mr. FREAR. What was the situation of the air service at that time?

Col. PATRICK. After that date and up to November 11, the date of the armistice, I have the figures here, which I think may be interesting.

Mr. FREAR. Let me see your tables so I may understand how to make my memorandum in tabulated form.

Col. PATRICK. Here is an easy way to tabulate it, as you will see from this statement, I think. It shows pursuit, observation, day and night bombardment planes, and then the total.

Government.	Pursuit.	Observation.	Day bombardment.	Night bombardment.
British.....	759	503	306	190
French.....	1,344	1,505	225	247
American.....	330	293	117	.....
Italian.....	336	360	36	80
Belgium.....	40	100	.....	6
German.....	1,020	1,442	.....	268
Austrian.....	220	201	.....	11
Combined allies.....	2,814	2,761	654	325
Combined enemy.....	1,240	1,833	.....	279

Mr. FREAR. Now, that was on November 11, 1918?

Col. PATRICK. Yes, sir; that day of the armistice.

I have also a comparison of the balloon strength—and I might say to you that balloons are a very important feature.

Mr. FREAR. We will be very glad to get that.

Col. PATRICK. I can give you that for the other date or for both, if you prefer.

Mr. FREAR. We would like to have both.

Col. PATRICK. It comes in this form, as you will see from my statement, and I was very careful to get that information. [Showing Mr. Frear his form of statement.] This is the balloon strength on July 30, 1918, and November 11, 1918:

Government.	July 30, 1918.	Nov. 11, 1918.	Government.	July 30, 1918.	Nov. 11, 1918.
Italian.....	35	32	Total German strength.....	170	170
Austrian.....	25	26	Combined allied balloon strength.....	164	176
Belgium.....	6	6	Combined enemy balloon strength.....	196	196
American.....	8	23			
British.....	42	43			
French.....	73	72			
Total allied balloon strength, western front.	129	144			

Mr. FREAR. That is, the balloon service remained about stationary for the last few months.

Col. PATRICK. It remained about stationary except that our own increased from 8 to 23.

Mr. FREAR. Who furnished us those balloons?

Col. PATRICK. We got them over here, sir. The French furnished us some balloon accessories, but the balloons themselves, and excellent ones, came from over here.

Mr. FREAR. Were they observation balloons, such as we use around harbors?

Col. PATRICK. Yes, sir; sausages, we call them.

Mr. FREAR. This increase in American balloons was from 8 to 23?

Col. PATRICK. Yes, sir.

Mr. FREAR. The British and French were practically at a standstill?

Col. PATRICK. Yes, sir; practically so, and so were the Germans.

Mr. FREAR. And so were the Italians and the Austrians?

Col. PATRICK. Yes, sir.

Mr. FREAR. What use was made of balloons?

Col. PATRICK. To observe the traffic on roads, and more particularly to observe artillery fire.

Mr. FREAR. They were not in use on the various fronts, were they?

Col. PATRICK. Indeed they were; yes, sir. Now, Mr. Chairman, may I go back just one moment and state that we had received from the United States on November 11, 1918, 275 balloons and received from the French 20?

Mr. FREAR. That was up to the time of the armistice?

Col. PATRICK. Yes, sir. We had gotten 20 from the French. And, by the way, we had furnished the French with 20 and furnished to the English 15 up to the time of the armistice.

Mr. FREAR. The 20 were practically returned, then?

Col. PATRICK. Yes, sir; practically borrowed from the French and then returned.

Mr. FREAR. Where were those 275 balloons—at the front?

Col. PATRICK. No, sir; not all at the front. We had sent to the front 77 out of our total. We had 17 companies operating, and at the front we had 23 balloons in operation. The remainder of the balloons were in reserve and ready to be sent to the front.

Mr. FREAR. Then in the matter of balloons we had a preponderance of strength?

Col. PATRICK. No, sir; the Germans had more balloons than the combined Allies had.

Mr. FREAR. But we had 275 balloons?

Col. PATRICK. Yes, sir; but not all in operation. Some of them were in storage. We had only 23 balloons actually operating on the front. The others were in storage and ready to go to the front.

Mr. FREAR. They had not been placed in use?

Col. PATRICK. No, sir.

Mr. FREAR. Where were they—at the front?

Col. PATRICK. Those that were in use were at the front, but the others were in storage depots.

Mr. FREAR. This is a report of the balloons that had been received in France?

Col. PATRICK. Yes, sir.

Mr. FREAR. Or in Great Britain, or wherever they had been shipped to?

Col. PATRICK. Yes, sir.

Mr. FREAR. And they had not reached the front?

Col. PATRICK. No, sir.

Mr. FREAR. But that is not true in regard to the planes that you are speaking about. Those are supposed to be at the battle front?

Col. PATRICK. Yes, sir; and so were the figures that I gave you. They were then actually on the front, except the last ones.

Mr. FREAR. Those 23 were at the front?

Col. PATRICK. Yes, sir; but I was trying to give you the entire statement.

Mr. FREAR. And I was trying to reconcile those statements that you made.

Col. PATRICK. Yes, sir; a total of 275 balloons had been received from the United States, and 23 of them were operating. You understand that a balloon would not last forever. They were shot down very often and had to be replaced.

Mr. FREAR. I suppose that was the reason the balloons the Allies had remained about stationary in number—they were replaced?

Col. PATRICK. No, sir; that is not the reason. It was a matter of personnel more than anything else.

Mr. FREAR. Men to fly them?

Col. PATRICK. Yes, sir; men to operate them. The French and the English did not seem to realize quite so clearly, or, I would say, quite so soon as the Germans, the great value of the balloons.

Mr. FREAR. The observation balloons?

Col. PATRICK. Yes, sir. The result was that they did not pay quite that much attention to them at the outset, while, on the other hand, Germany seemed to see the importance of them and got them into operation at an early date. However, the English and the French were training men very rapidly and increasing their balloon forces at the front, and we were doing the same thing.

Mr. FREAR. How many men does it take to operate a balloon?

Col. PATRICK. A balloon company contains nearly 200 men. They have to carry it around by the men, maneuver it by men. It takes a large number of men to keep a balloon going, and each balloon company usually has two balloons.

Mr. FREAR. Do I understand you to say that during the months of August, September, and October, over three months, that the British and French simply remained stationary with their balloons because they did not, during all that period, believe that it was a very important arm of the service; is that reason?

Col. PATRICK. I tried to make myself clear. During the early stages of the war and up to that time—

Mr. FREAR (interposing). Up to what time?

Col. PATRICK. Up to about the time of the attack by the Germans, in the spring of 1918.

Mr. FREAR. Well, that is prior to this date?

Col. PATRICK. Yes, sir. Up to that time the Germans relied more upon and believed more thoroughly in the efficacy of balloons, as observation posts, if I may put it that way, than the countries fighting them believed. The result was the French and English—

Mr. FREAR (interposing). What is "after that time"?

Col. PATRICK. After that time the French and the English realized their importance more and more, and they were training men for balloon service, as far as that is concerned.

Mr. FREAR. But they had made no progress in the balloon service on the front?

Col. PATRICK. No, sir.

Mr. FREAR. Why was that true?

Col. PATRICK. Only because of the time it takes to train men. They had the men but they had to be trained.

Mr. FREAR. How long does it take to train a man for balloon service, usually?

Col. PATRICK. I will ask Col. Gorrell to answer that.

Col. GORRELL. Balloon observers had about one month's service on the front and about two months in a school.

Col. PATRICK. No; it takes longer than that. I should say that to train a balloon observer probably takes, all told, about four months.

Mr. FREAR. Well, then, if the French and the British appreciated the importance of that branch of the service, and yet their balloon strength remained stationary for over three months, how do you account for it? Did they have balloons that they were not using? Would there be an increase—

Col. PATRICK (interposing). The French and the English were probably not so well prepared to supply balloons as we were. We were turning them out quite rapidly, and an exceedingly excellent balloon, and the English got them from us, and the French got them from us, too, although we got some from them, but we replaced them. It may have been a matter of matériel as well as personnel in their need. Also I would say that the number of balloons that are used depends largely upon the number of troops in the front line. That is, each division will have generally one or two balloons. The French forces and the English forces were remaining then at about a standstill, or decreasing, while our own forces were increasing rapidly, and consequently our balloon force was increasing.

Mr. FREAR. Did this balloon force increase that defense?

Col. PATRICK. Yes, sir.

Mr. FREAR. About what interval between the fighting?

Col. PATRICK. There is no fixed interval, but it all depends entirely upon the operations that are taking place.

Mr. FREAR. You say there will be two balloons for each division?

Col. PATRICK. Each balloon company had two balloons, but they usually put up one.

Mr. FREAR. Did the Germans have the same comparative arrangement?

Col. PATRICK. Practically the same. For instance, at the beginning of the Argonne attack I counted 15 of our own in sight from one point. They were distributed along the line where they would do the most good; sometimes quite close together and sometimes miles apart.

Mr. FREAR. They reported by telephone down to the front the movements of the troops, etc., did they?

Col. PATRICK. Yes, sir.

Mr. FREAR. All right. Are you now waiting for a question?

Col. PATRICK. No. I can only say from that time on we spent every effort to get the air forces in the field and everything in good shape and provide sufficient supplies.

Mr. FREAR. Did you have charge of the cablegrams that were sent to America in regard to aircraft?

Col. PATRICK. I did.

Mr. FREAR. You sent the Pershing cablegram of June 24, did you?

Col. PATRICK. What was that cablegram?

Mr. FREAR. A cablegram containing 60 objections to the Liberty motor.

Col. PATRICK. It was from my office; yes, sir. I would say that I sent it.

Mr. FREAR. Was that cablegram substantially correct in that form?

Col. PATRICK. Yes, sir.

Mr. FREAR. And it was sent June 24, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. And those conditions existed just as contained in that cablegram?

Col. PATRICK. Yes, sir.

Mr. FREAR. Liberty engines were being sent over there at that time, were they?

Col. PATRICK. Yes, sir.

Mr. FREAR. And those engines, according to that cablegram, were in such condition that many of them could not be used on account of the shape in which they arrived. I have not the cablegram here at the present time because I did not know that we were going to examine you this morning, so that I can not refer to it.

Col. PATRICK. Nor have I the cablegram. But my recollection is that some of the Liberty motors had minor defects which we had to point out. But I do not think that I should say many of them could not be used; the majority of them could be used as they came over, and some of them had to have minor repairs made to them before they could be used.

Mr. FREAR. How were they used?

Col. PATRICK. How were they used?

Mr. FREAR. Yes; for what purpose?

Col. PATRICK. They were put in the DH-4 planes.

Mr. FREAR. Were they used in any other machines?

Col. PATRICK. We used them in no other.

Mr. FREAR. Did any other country use them in theirs?

Col. PATRICK. The French were eager to get some of the Liberty motors at the time of the armistice, and were to put them in the Breguet planes.

Mr. FREAR. Were any used in any other branches of the service at the time of the armistice outside of the DH-4?

Col. PATRICK. I think no Liberty engine went to the front for use except in the DH-4 planes.

Mr. FREAR. The DH-4 is what kind of plane? What do you call it?

Col. PATRICK. We call it an observation plane primarily; it is a two-seater.

Mr. FREAR. That is an observation plane; that is not a pursuit plane?

Col. PATRICK. No, sir.

Mr. FREAR. And it is not a bombing plane?

Col. PATRICK. It is not essentially a bombing plane, although we did use it for day bombardment work, equipping it with racks to carry bombs.

Mr. FREAR. What was the feeling in the service and with yourself as to the DH-4? Objection was urged, in one respect as to the arrangement of the tank and the motor, and urged quite frequently—the tank and the motor at different points. What was your own judgment about that?

Col. PATRICK. May I put it this way? The men who flew, it has been said a number of times, are temperamental, and I have found all sorts of opinions from men who were presumed to be equally expert, about the DH-4 plane. I have found men who flew it who were absolutely enthusiastic about it, and thought it was the best plane sent to the western front; and then, on the other hand, I have found others who condemned it for various reasons. My own judgment is that the plane when placed in manufacture here was as good a plane of its type as had then appeared on the western front—

Mr. FREAR (interposing). At what time would that be?

Col. PATRICK. We might say that was the beginning of 1918 or the fall of 1917.

Mr. FREAR. Was the DH-4 placed in manufacture here in 1917?

Col. GORRELL. The cables came from over here that the first DH-4's were sent, I believe, in May, and we had them on July 4, 1918.

Mr. FREAR. It was not sent over from here, then, was it?

Col. GORRELL. Yes, sir; and it was the same as the English DH-4 with the exception of the motor.

Mr. FREAR. The DH-4 of the English make I mean, had a Rolls-Royce motor in it, didn't it?

Col. GORRELL. That is true, but the Liberty engine is lighter and has greater horsepower.

Mr. FREAR. The DH-4 was not put in manufacture here, as I understand, until the summer of 1918.

Col. PATRICK. No, sir; that is true.

Mr. FREAR. With the Liberty engine?

Col. PATRICK. No, sir. They began to be delivered in France in the summer of 1918.

Mr. FREAR. At what time?

Col. PATRICK. In July. The first one came over in May, 1918.

Mr. FREAR. Was that equipped with the Liberty engine?

Col. PATRICK. Yes, sir. Then they began to be received in quantities in July, 1918.

Mr. FREAR. The Liberty engine in the DH-4 will remain in the air for how long a time?

Col. PATRICK. Two and one-quarter hours.

Mr. FREAR. What is its ceiling, or the elevation to which it rises in flight, for day bombing?

Col. PATRICK. About 12,000 feet when loaded with its bombs.

Mr. FREAR. How long a period does it take to reach that elevation?

Col. PATRICK. I do not know whether I have those figures with me or not. I have the most of the data but do not know that I have that here.

Mr. FREAR. We have it in the record.

Col. PATRICK. All right.

Mr. FREAR. According to the testimony of Col. Clark, who sent word over here in regard to this airplane when he went over on the Bolling Commission—and I read this to the Secretary of War—the ceiling of the DH-4 is 15,000 feet, and it takes 48 minutes for it to reach the ceiling, and for that reason Col. Clark said it was of little value as a bomber because so much time was consumed; and he gave two reasons, one being the ceiling to which it must first go, and then the fact that it carried, I believe, 70 gallons of gasoline, or was it 75?

Col. PATRICK. Seventy-five gallons of gasoline.

Mr. FREAR. And that 37 gallons were used each hour, as I understand.

Col. GORRELL. It doesn't work that way in practice, and for this reason: The time taken to reach an elevation depends upon the location behind the line, and also upon the terrain. They generally get up about 10,000 feet before crossing the lines, and that would be the elevation at which they would ordinarily bomb the enemy. If your aerodrome was 10 or 15 miles behind the lines the situation would be one thing, and if it was located 25 miles behind the lines they would not have to circle around, as would be the case if they were a short distance behind the lines, but would go straight over. They would get to about the same altitude over their objective, and bomb it at about that altitude, and after doing the bombing they would come back across the line at some other point. So under some circumstances the machine does not take so much time to reach its ceiling.

Mr. FREAR. How much time was consumed in reaching the objective? Were you engaged in the bombing service?

Col. GORRELL. I was in G-2, G. H. Q.

Mr. FREAR. Were you engaged in handling fighting planes?

Col. GORRELL. I have not participated in bombing raids.

Mr. FREAR. What time did you say it required to reach the ceiling?

Col. GORRELL. They would take about 25 to 30 minutes before they would cross the line.

Mr. FREAR. How much time would elapse before they would reach the elevation, did you say?

Col. GORRELL. That would be about 25 or 30 minutes, when it was crossing the line. It would cross the line at the altitude it intended to maintain. You must allow one thing, and that is, that balloons do not climb as fast, as they tell you, in tests because in service they climb in formation and keep together, and when they cross the line the formation is intact, and just before it reaches the line they are intact so as to ward off any attack by enemy pursuit planes.

Mr. FREAR. Do you mean to say that Col. Clark's testimony is incorrect when he stated it took 48 minutes to reach its altitude?

Col. GORRELL. By no means. Col. Clark was talking about tests on the test ground.

Mr. FREAR. Col. Clark was over in France at the time of the fighting.

Col. GORRELL. Col. Clark was with me and came home in August.

Mr. FREAR. That was not in test grounds over here but over there.

Col. GORRELL. You had test grounds in England and in France.

Mr. FREAR. He was with the Bolling Commission.

Col. GORRELL. Yes, sir; and he was with me.

Mr. FREAR. But he came back and took charge of some of the work here, and has been spoken of as a very high expert.

Col. GORRELL. I regard him as one of the best men in the country.

Mr. FREAR. His testimony was that it took 48 minutes for the DH-4 to reach an elevation to carry on bombing, but you say it is carried on at an elevation of 12,000 feet?

Col. GORRELL. Ten thousand or 12,000 feet.

Mr. FREAR. Perfectly safely?

Col. PATRICK. Nothing is safe in warfare. If you go 15,000 feet it will probably take a little longer.

Mr. FREAR. I was wondering why Col. Clark would say it was necessary to reach an altitude of 15,000 feet, and yet that is the explanation he gave the Thomas Committee as to the DH-4 bomber?

Col. PATRICK. All operations on the front never took place at the same altitude. You may do it at 500 feet or 1,000 feet or 10,000 feet or sometimes 20,000 feet.

Mr. FREAR. Do you use the DH-4 near the ground?

Col. PATRICK. The DH-4 was used very near the ground when shooting up enemy troops.

Mr. FREAR. What number of DH-4's did you have in actual service; not boxed up but in actual service on the 30th day of July, of which you spoke?

Col. PATRICK. I will answer you in a minute about that, as soon as I can get the data. But I want to say that we all recognized Col. Clark as a very valuable man. But I take it that his statement was that the DH-4 reached its theoretical ceiling of about 15,000 feet—

Mr. FREAR (interposing). He did not use the word "theoretical."

Col. PATRICK (continuing)—in 48 minutes. But it does not follow that in order to carry out a bombing operation you have to reach that altitude. They would put the aerodromes for bombing operations, as a rule, some distance back behind the line. The bombing of course, all took place beyond the lines, so that a machine would endeavor to go straight, and to get up to about its elevation about the time it crossed the line, and that elevation might be anything from 8,000 feet to 15,000 feet up, as far as bombing is concerned. Furthermore, frequently when using them, as the Germans called it, as strafing machine—that is, a machine used against troops—and of course the troops are on the ground, the altitude sometimes might not be over 100 to 500 meters.

Mr. FREAR. And that is how far?

Col. PATRICK. Three hundred to 1,500 feet.

Mr. FREAR. Do the machines run along that low?

Col. PATRICK. Yes, sir.

Mr. FREAR. On both sides?

Col. PATRICK. Yes, sir.

Mr. FREAR. Well, that doesn't give sufficient protection to the airplane, the protection that they ought to have, does it? This is what I mean to say: That if they were at that elevation they were liable to be destroyed from the ground, were they not?

Col. PATRICK. Absolutely.

Mr. FREAR. The hazard was much greater than was necessary, don't you think? In other words, if the machines were at a sufficient elevation they would have protection?

Col. PATRICK. No, sir; I can not say that any hazard in aviation is unnecessary. We had to take all sorts of chances, and machines came down as low as 150 feet, and less than that, perhaps, sometimes, when going against machine-gun nests on the ground.

Mr. FREAR. In bombing?

Col. PATRICK. No; but when using some fragmentation bombs they came down very low, using them against troops in machine-gun nests.

Mr. FREAR. If that is all true what did Col. Clark mean by the suggestion that this machine should go up 15,000 feet? I understood they went up to that elevation before they proceeded to do any bombing. But you say if necessary they would be down as low as 150 feet?

Col. PATRICK. I am not at all familiar with Col. Clark's testimony, sir.

Mr. FREAR. Who testified before the Thomas Committee.

Col. PATRICK. I am merely telling you the facts as we saw them. As I understand Col. Clark returned quite early in 1917, and I am telling you what took place in 1918, and conditions could scarcely be compared to the methods of using the planes on the front.

Mr. FREAR. Is that the fighting machine or the bombing machine?

Col. PATRICK. All of them were fighting machines—you might say all of them. You asked me something about the numbers.

Mr. FREAR. Can you give us the number of DH-4's we had over there on the 30th of July?

Col. PATRICK. Oh, we had nothing—of the DH-4's we had practically none, sir.

Mr. FREAR. Will you give me the dates at which they were received, if you have them, that is, at the front?

Col. PATRICK. On August 2d was the first time that any American-built plane crossed the front line; 18 of them, if I recall right, went over in formation on that date.

Mr. FREAR. That is, 18 DH-4's?

Col. PATRICK. Yes.

Mr. FREAR. What was the next statement you have there?

Col. PATRICK. I can tell you November 11 how many we had at the front. On that date, sir, we had 213 at the front actually in use.

Mr. FREAR. That was DH-4's?

Col. PATRICK. Yes, sir.

Mr. FREAR. That is the only American machine we had?

Col. PATRICK. The only American machine we had, sir.

I should like to add this figure to it, sir, that I sent to the front, for use with squadrons, a total of 667 American-built planes prior to the date when hostilities ceased.

Mr. FREAR. You sent them to the front; that is, you mean after November 11?

Col. PATRICK. No, sir, before November 11.

Mr. FREAR. Two hundred and thirteen DH-4's you say here?

Col. PATRICK. That is, in operation. Many of these machines which have gone to the front were destroyed.

Mr. FREAR. Six hundred and sixty-seven American planes had been sent to the front of American make?

Col. PATRICK. Yes, sir.

Mr. FREAR. What kind were they?

Col. PATRICK. DH-4's.

Mr. FREAR. Six hundred and sixty-seven DH-4's had been sent to the front altogether?

Col. PATRICK. Yes, sir.

Mr. FREAR. So that only 213 were in existence on November 11?

Col. PATRICK. Only 213 were in operation; a few others may have been in storage and ready to go up to the front.

Mr. FREAR. In other words, there were 454 machines destroyed?

Col. PATRICK. No, sir, not destroyed. There were a certain number destroyed, and a certain number were there at the front ready for use.

Mr. FREAR. How many did you lose?

Col. PATRICK. We lost in all 357 aircraft, I think, sir.

Mr. FREAR. That is, during the entire service?

Col. PATRICK. Yes, sir.

Mr. FREAR. If 667 DH-4's were sent over, and only 213 were on the front on November 11, what became of the others?

Col. PATRICK. Certain of them had been destroyed in operation, and the remainder were in storage—that is, were at the storage depot ready to be supplied to the squadrons when they were needed.

Mr. FREAR. But 357 were all that were destroyed, of all kinds of machines?

Col. PATRICK. All kinds of machines; yes, sir.

Mr. FREAR. What proportion of DH-4's; a very small proportion?

Col. PATRICK. I have not that figure here.

Mr. FREAR. So that the others were those in storage and boxed up?

Col. PATRICK. No, sir; not boxed up; they were assembled.

Mr. FREAR. I mean "assembled."

Col. PATRICK. When I say "sent to the front," I mean that a machine has gone to the front ready to be put in the front line of fighting.

Mr. FREAR. And only 213 were being used?

Col. PATRICK. Two hundred and thirteen were being used; certain others had been used and were destroyed; and others were in storage ready for use.

Mr. FREAR. You had as high as 667 at the front?

Col. PATRICK. It is possible I am making this less clear.

Mr. FREAR. Let us see if this is not the fact: Two hundred and thirteen D. H. 4's were at the front used in fighting at the time of the armistice; 667 had been sent over there, leaving a difference of 454 that had either been destroyed or had not been used in the service.

Col. PATRICK. With one exception: The total number of planes sent over was 1,213.

Mr. FREAR. Then you had 1,213 at the front instead of 667?

Col. PATRICK. Of the 1,213, I had assembled and sent to the front for use on the front line 667; the remainder of the 1,213, sir, many of them were sent to the schools for use in training.

Mr. FREAR. To be used in advanced training?

Col. PATRICK. Yes; I thoroughly believed in putting the men on machines that they were going to fly with and giving them practical familiarity with them before they went to the front, and therefore

I thought it was wise to send some of these machines and let them have that experience.

Mr. FREAR. And 213 were in use?

Col. PATRICK. Two hundred and thirteen were with our air forces in use at the front. That came out of the total of 667 that had been sent to the front line; of the remainder, 254 had been destroyed, and the remainder were at the depot and ready to be sent to the front and replace any other machines of the same type destroyed or not in condition to be used.

Mr. FREAR. You could have used more than 213 in the service?

Col. PATRICK. Not at that time.

Mr. FREAR. That is all you had use for at that time?

Col. PATRICK. Yes.

Mr. FREAR. Coming back to our date of July 30, the Americans had 126 pursuit planes at that time?

Col. PATRICK. Yes, sir.

Mr. FREAR. Where did they get those from, and what kind of machines were they?

Col. PATRICK. Mainly from the French; there may have been a few English machines among them.

Mr. FREAR. The observation machines were 126, the same number. Where did we get those?

Col. PATRICK. Those came wholly from France.

Mr. FREAR. And the number of day bombers was 18 at that time?

Col. PATRICK. They were French, also.

Mr. FREAR. On November 11, the American pursuit planes you had numbered 330?

Col. PATRICK. We had 330, and a large majority of those were from the French. We had one squadron equipped with an English type of plane.

Mr. FREAR. Of observation planes you had 293. Does that include the 213?

Col. PATRICK. Yes, sir. Of the 293, the 213 D. H. 4's were included, and the remaining 18 were French planes.

Mr. FREAR. And the day bombers you had 117?

Col. PATRICK. I will have to back and correct that statement. The day bombers, 213, were not all included in the observation. Some of them were used as day bombers. So that the 213 were divided between the observation and the day bombardment.

Mr. FREAR. Out of the 410 observation and day bombing machines 213—

Col. PATRICK (interposing). Were American planes.

Mr. FREAR. And those were the only American planes?

Col. PATRICK. Those were the only American planes we were using at that time.

Mr. FREAR. Or at any other time?

Col. PATRICK. Yes, sir.

Mr. FREAR. You had no night bombers at any time?

Col. PATRICK. We had no night bombers at any time. I had one squadron which was being prepared as a night bombardment squadron, and the squadron itself was ready and the planes we were to get ready.

Mr. FREAR. What kind of machines were they?

Col. PATRICK. I expected to use either Briguet French, or some were F. E. 2 B., of which I had enough to equip two squadrons.

Mr. FREAR. What was the substantial difference between the night bombers you speak of and the American DH-4; that is, the DH-9 was really intended, was it not, as a large bombing plane?

Col. PATRICK. No, sir; the DH-9 was intended to replace the DH-4.

Mr. FREAR. For the same kind of work?

Col. PATRICK. The same thing.

Mr. FREAR. You never received any of those over there?

Col. PATRICK. I think two reached France long after hostilities ceased, and I sent them right back.

Mr. FREAR. Did the French have sufficient aviators for their machines at all times?

Col. PATRICK. I think I can answer, yes; they had sufficient for their airplanes at practically all times.

Mr. FREAR. Did they have more than enough; did you know anything about that? Have you any figures here to show what number of French were in the aviation service flying?

Col. PATRICK. No, sir; not at that date. I have elsewhere figures that give the total the French had at various dates during the war, and I know that the French contemplated an increase in their air service during the last part of 1918 and up to June 30, 1919, and they assured me that they were able to turn out a sufficient number of aviators, and also a sufficient amount of materials to equip this increase as they had a schedule from month to month.

Mr. FREAR. Did you have enough machines from the French at all times for your use, for the men you had there for aviators?

Col. PATRICK. For the men that I had; yes. We had from the French the planes that were needed practically all the time. We had to insist a number of times to hasten their deliveries, and to speed up their production. But there was practically no lack of material from the French as we needed it.

Mr. FREAR. Is it not true that the French entered into contract with us for the production of machines, and that we were to furnish material, and that we fell down on that, which was one of the reasons for the cancellation of some of our American purchases?

Col. PATRICK. Of what, sir?

Mr. FREAR. Of machines from the French.

Col. PATRICK. It is true that there was an agreement concluded in August, I think, of 1917 by Col. Bolling with the French in which it was prescribed that we should furnish some material and that the French deliver certain planes. The agreement—I spoke of earlier in my testimony—of May, 1918, replaced that Bolling agreement, and thereafter the French found no great difficulty in living up to it and supplying us with machines.

Mr. FREAR. If the French could furnish all the machines we needed and all the machines they needed, what was the need of manufacturing machines at all?

Col. PATRICK. The French were prepared to furnish all the observation and bombing machines we needed.

Mr. FREAR. Do you call the DH-4 an observation machine?

Col. PATRICK. Yes. All our plans contemplated that after the 1st of January, 1919, we would make no further demands upon the French for any observation planes at all.

Mr. FREAR. The observation planes were armed planes?

Col. PATRICK. You mean had guns upon them?

Mr. FREAR. Yes.

Col. PATRICK. Oh, yes.

Mr. FREAR. What have you to say in regard to the DH-4 as to whether it was a dangerous plane or not, with the gas tank at one end and the motor at the other, the observer sitting in between?

Col. PATRICK. I think the DH-4 could have been improved, beyond question, due to the experience that was gained after it had been decided upon as the type of plane to be produced over here, and that the DH-9, from what I know of it, would have been a very much better plane.

Mr. FREAR. Was it a dangerous plane for the pilot—did he have any chance to escape from his position between the gas tank and the motor?

Col. PATRICK. Did he have any chance for escape?

Mr. FREAR. Yes; in case of an accident. The testimony has been offered before the Thomas committee that a man had practically no chance of escape in case of accident, sitting between the gas tank and the motor.

Col. PATRICK. I, myself, am not a flying officer.

Mr. FREAR. Have you ever been flying?

Col. PATRICK. I have been taken up a number of times, but I, myself, am not a flyer. I am most too old for that. But I do not know that I can answer that question yes or no. As I said a moment ago, I found a number of flying officers at the front who were very enthusiastic over the DH-4 plane.

Mr. FREAR. What criticism did the others offer?

Col. PATRICK. The ones who did criticize it?

Mr. FREAR. Yes.

Col. PATRICK. Mainly on account of the distance between the observer and the pilot—that was one of the things. There was some talk also about the unprotected gas tank on the DH-4 plane.

Mr. FREAR. In what respect was that unprotected tank different from the other machines? Were the German machines protected?

Col. PATRICK. So far as our records show, and we investigated very carefully, the Germans never used a protected tank. The English had no tanks that were properly protected. The French were the only ones who had protected tanks, and they were a late development. We ourselves were having tanks made to put in our DH-4's and were replacing the unprotected tanks as rapidly as produced. I made the contract for them over there, and we had received some just about the time of the armistice, and it was my intention to replace every unprotected tank with a protected tank, but that was a late development of the war.

Mr. FREAR. That was the DH-9?

Col. PATRICK. I had only DH-4's.

Mr. FREAR. You had charge of the men—the aviators—in the service?

Col. PATRICK. I had in this way, that the commander in chief held me responsible, as I stated, for everything in the Air Service. I was not actually in command of the aviators in front flying over the lines. I did not directly give orders; I had other officers under me who did so.

Mr. FREAR. Have you a statement of the number of men in the Air Service at that time at the front ?

Col. PATRICK. Yes, sir; I think so.

Mr. FREAR. In the Air Service; that is, the actual flying service ?

Col. PATRICK. May I ask you whether this data will answer your question, sir ? [After referring to papers.] I had pilots completely trained on November 11, 1,674, and 851 completely trained observers. Then, I will add this figure, that the total of the completely trained flying personnel of all classes on November 29, 1918—my schools continuing after the armistice—were 2,768, of all classes, pilots, observers, and everything else.

Mr. FREAR. What date past November 11 had you those men in the service ?

Col. PATRICK. May I answer it in this way, sir ? This again, is November 11: There were with our American squadrons 774 pilots and 457 observers.

Mr. FREAR. Just a moment. These are different figures than you gave before.

Col. PATRICK. I was giving figures of men in training.

Mr. FREAR. But those are trained ready for flying ?

Col. PATRICK. I am telling you—some of them had been killed.

Mr. FREAR. How many had you on November 11 at the front ?

Col. PATRICK. On November 11 I had 774 pilots and 457 observers, 23 aerial gunners, and the necessary complement of soldiers to go with these squadrons. The total number of planes with the squadrons themselves were 740.

Mr. FREAR. That took all the men that you had at the front, did it ?

Col. PATRICK. That was all I had at the front at that date.

Mr. FREAR. Did you have any other men that were able to go to the front over there in France ? How many men did we have in the air service over there in Europe at that time ?

Col. PATRICK. I had at that time a total of 7,726 officers of all kinds and ranks, this includes flying and nonflying; and I had 70,769 men in Europe. Of these totals 6,816 officers and 51,229 men who were in France.

Mr. FREAR. These machines were scattered all along the front ?

Col. PATRICK. They were with our own forces at the front.

Mr. FREAR. You say there were 70,769 men in France ?

Col. PATRICK. No, sir; in Europe.

Mr. FREAR. All told ?

Col. PATRICK. Yes, sir.

Mr. FREAR. You had 7,726 flying officers ?

Col. PATRICK. No, sir; officers, including flying and nonflying.

Mr. FREAR. What proportion were nonflying ?

Col. PATRICK. I have not the figures here available just at this moment.

Mr. FREAR. Did you mean to say, then, Colonel—

Col. PATRICK (interposing). I might say I have not the exact figures before me. But, roughly, about half of the total number of officers were flying officers. That is merely a recollection.

Mr. FREAR. That would be about 3,500 ?

Col. PATRICK. Something like that.

Mr. FREAR. If 3,500 officers were fliers, how many machines did you need for a flier ?

Col. PATRICK. A flier will use a good many machines, but at the time you will simply need one for a flier.

Mr. FREAR. What proportion of machines were supposed to be used for a flier?

Col. PATRICK. Practically one machine.

Mr. FREAR. Do they not require two machines for a flier?

Col. PATRICK. No, sir.

Mr. FREAR. I have so understood; may be my information is not correct.

Col. PATRICK. I do not know that I quite understand you.

Mr. FREAR. That is because of the delay that would otherwise occur in case of accident and injury to the machine.

Col. PATRICK. You mean how many machines were required to be on hand in order to supply the total number of fliers? Oh, a much larger number than the number of pilots. Twice as many would be a moderate estimate. Please do not understand that I had available and ready to fly 3,500 officers.

Mr. FREAR. How many did you have?

Col. PATRICK. The only pilots I had available at that time were the number that were manning the planes I had at the front, which I think were 744.

Mr. FREAR. Was that all the pilots that you had out of 70,769 men—that is about 1 to——

Col. PATRICK (interposing). May I say those 70,769 were enlisted men: they were not flyers at all. They kept their feet on the ground.

Mr. FREAR. Some of them did?

Col. PATRICK. All of them did, practically all of them did.

Mr. FREAR. Then, did it take 70,769 men and 7,726 officers to keep 744 pilots going?

Col. PATRICK. I want to see if I am getting my figures right. Of the 70,769 men, 20,000 were in training in England, which left about 51,000 which were in France, of men.

Mr. FREAR. You were giving me 744 pilots?

Col. PATRICK. I am just giving you those at the front.

Mr. FREAR. It has that relation?

Col. PATRICK. Yes, sir.

Mr. FREAR. 51,000 enlisted men, and how many officers did you say for these 744 pilots?

Col. PATRICK. According to my figures, something over 7,000 officers all told.

Mr. FREAR. Where were they?

Col. PATRICK. Some of them were with the flying officers counted in that number, and the rest were at the depots and repair plants and everything of the kind.

Mr. FREAR. Can we get any nearer estimate than the difference between 3,500 and the 744 pilots to find out what proportion were flying officers?

Col. PATRICK. I must add to the pilots, of course, the number of men who were observers; who were flying officers, very naturally. I must add the aerial gunners also; they were flying officers. There were others, many of whom were instructors of the schools who were trained, and who were turning out flyers as rapidly as they could, and we had very large flying schools for them.

I found that the English, who, of course, had had more experience in this aerial warfare than we, needed an average of about 22 men in France for each plane that they placed at the front. They were doing no training in France, and they were doing a small amount of their repair work in France.

Mr. FREAR. You mean for mechanics and all?

Col. PATRICK. Yes, sir; all. Then they had about 60 men for every plane that they had at the front, making a total of something like 80 men which were required for every plane that was placed at the front. I estimated that our own service, as we were doing a considerable amount of repair work and also doing assembly work in France, would need from 35 to 40 men for every plane that we placed at the front.

The proportion of men to planes in the French service differed but little from that in the English service.

Mr. FREAR. Let me see if I understand that as you go along: Forty men for 744 pilots would mean 29,600, and you had 51,000?

Col. PATRICK. I was also doing a great deal of construction work with some of our construction men, and I was building and getting ready for a very much larger front than we were then covering.

Mr. FREAR. So that these other men were engaged in other work?

Col. PATRICK. They were engaged in other work.

Mr. FREAR. At the time of the signing of the armistice there were 3,321 French machines flying at the front?

Col. PATRICK. Yes, sir.

Mr. FREAR. And there were 740 American planes?

Col. PATRICK. Seven hundred and forty machines with the American Air Service.

Mr. FREAR. That is the proportion we had?

Col. PATRICK. Yes, sir.

Mr. FREAR. And 1,758 were British?

Col. PATRICK. The British had 1,758 machines.

Mr. FREAR. And 812 were Italians. Was that out of proportion for the number of troops we had at that time at the front?

Col. PATRICK. No, sir.

Mr. FREAR. What number of troops did we have there?

Col. PATRICK. Over 2,000,000 in France, of course.

Mr. FREAR. How many did we have at the front?

Col. PATRICK. About 1,250,000.

Mr. FREAR. How many men did the French have at that time?

Col. PATRICK. I think the French had a somewhat larger force than our own in actual fighting strength. The English had a somewhat less fighting force than our own. My recollection is that the English had about 900,000 rifles; my recollection is that the French had something like 1,500,000. But, please understand that is from memory; I was not concerned with those figures at the time.

Mr. FREAR. I am trying to get at a certain principle, if it has any effect: What I intended was to ask if our proportion of flying machines to the number of men that we had engaged was the full equipment, or as many as the others had?

Col. PATRICK. No, sir; it was not.

Mr. FREAR. Why not?

Col. PATRICK. Simply because we had neither the men nor the machines to put at the front.

Mr. FREAR. We did have the men over there?

Col. PATRICK. No, sir.

Mr. FREAR. Had you asked for the men?

Col. PATRICK. No, sir; I had endeavored to get them from here. I cabled for them and gave them our program as to what we wanted to put at the front, and I hoped they would be able to meet it, and both in the men on the ground and flying officers. We had given them a very clear picture of what we were endeavoring to do.

Mr. FREAR. If there were 2,331 French flying at this time, they must have had 200,000 or 300,000 men engaged.

Col. PATRICK. They probably did.

Mr. FREAR. And they were engaged for an air service to an army of 1,250,000?

Col. PATRICK. 1,500,000. It will be understood that those were the French forces in the front line—what we might call rifles. In addition to that the French had a great many men back of the lines.

Mr. FREAR. I am referring to the front line fighting.

Col. PATRICK. Yes, sir.

Mr. FREAR. While we had 740 machines for 1,250,000?

Col. PATRICK. Very much less than we should have had.

Mr. FREAR. Then we did not have a sufficient number of machines?

Col. PATRICK. By no means.

Mr. FREAR. We had between 20 and 25 per cent as many as the French in proportion to the number of men?

Col. PATRICK. That is quite right.

Mr. FREAR. Were they needed at that time?

Col. PATRICK. They were.

Mr. FREAR. And I suppose you did everything you could to get them?

Col. PATRICK. Indeed, I did. We were also increasing our air forces very rapidly when the armistice was concluded, and I believe, had the war gone on another year, sir, we would have made an even better showing than we did.

Mr. FREAR. Is there any estimate of the number of air machines that there ought to be with an army of any particular size?

Col. PATRICK. Yes, sir. There is a very fairly accurate estimate that should be with an army of any size that you may name.

Mr. FREAR. Let us take 1,000,000 men at the front, then, for a basis.

Col. PATRICK. With 1,000,000 men at the front we would have to divide those up into divisions and into corps, in order to ascertain precisely how many troops should go with them; and we also have to know what would be the strength of the army artillery. I can say this, that for the 80 fighting divisions that were anticipated by us to be fighting at the front by July, 1919, the General Staff called upon me to supply 358 squadrons.

Mr. FREAR. How many men would that be?

Col. PATRICK. An army of 3,000,000 men, I gave you.

Mr. FREAR. And how many men would that be for the squadrons?

Col. PATRICK. They called upon me to have 358 squadrons with the 3,000,000 men. We may put it roughly in that proportion, which would be about 115 or 116 per million.

Mr. FREAR. How many airplanes to the squadron?

Col. PATRICK. I told you about 20 airplanes to the squadron.

Mr. FREAR. Then, that would be an average of 2,720 machines. I am trying to get the proportion of flyers, which would be 2,720 machines for a million men.

Col. PATRICK. That would be approximately.

Mr. FREAR. And, of course, for a million and a quarter would be larger?

Col. PATRICK. Yes, sir.

Mr. FREAR. That was due to the failure on our part to provide a sufficient number of air men and machines which we might have good reasons for?

Col. PATRICK. Yes, sir.

Mr. FREAR. But that was what we were needing up to that point, to have it on the same proportion as required for an Army of 3,000,000 men.

Col. PATRICK. With this one reservation, that when the General Staff told me to provide that, I said we could not do it.

Mr. FREAR. The French were doing it?

Col. PATRICK. The French were doing it, practically; yes.

Mr. FREAR. They had 3,371 for a million men; that would be in that proportion.

Col. PATRICK. In that proportion, but I may say that that by no means indicates that was the proper number of machines to have with troops, because the French and English were both endeavoring to increase their air forces as much as they could, even with the same number of troops.

Mr. FREAR. But even with the minimum that was given you it would take 2,720 for a million men?

Col. PATRICK. Yes, sir.

Mr. FREAR. And we had a million and a quarter men, and 740 machines?

Col. PATRICK. Yes, sir.

Mr. FREAR. So we were woefully weak in our own air service, both in machines and men?

Col. PATRICK. Yes, sir.

Mr. FREAR. I understood you were just fighting with the Liberty machines in the Brigquets?

Col. PATRICK. Yes, sir.

Mr. FREAR. And that is the only machine?

Col. PATRICK. The English were preparing to put it in some of their Handley-Paige machines also.

Mr. FREAR. When Col. Clark came back he testified that he ordered by cable in the month of June three English machines, two French, and one Italian. The Italian was a Caproni; I do not remember the names of the others; and when he came back in September he testified that no effort had been made in this country to manufacture any of these machines. The English used what machines at the front largely at that time?

Col. PATRICK. The English?

Mr. FREAR. Yes.

Col. PATRICK. At what time?

Mr. FREAR. During all the time.

Col. PATRICK. They used the DH-4 practically identical with ours.

Mr. FREAR. Excepting it had a different engine?

and he has had years of education and experience, and who—over there in England—

Q. Now, He is an English officer?

A. Yes, sir. He has been appointed an English officer. Before that he was first in the Royal Aircraft Factory as an engineer and later with the Aircraft Co., which is the company which makes the De Haviland machines. Over in England now he is in a position to be constantly in touch with the flyers at the front. He interviews every man that comes back who is thoughtful about analyzing the conditions at the front. He has been very active in the development of his machines. The De Haviland 4 and the De Haviland machines are a consequence of that man's labor along that line. As a matter of fact, but the De Haviland 4, as it was turned over to us, was a very poor machine. The first De Haviland 4 built was very poor, like all the other machines—the first experimental ones of new types. They found glaring faults and repaired these faults and built a sufficient number, until the machine had been developed through eliminating these faults. This machine—when it came over here—came over here and was turned over to men who have not the same education in aeronautical engineering and have not in the slightest degree the same experience.

Q. The De Haviland machine was sent over here for use as a model?

A. Yes, sir.

Q. Now, when was it delivered?

A. It was delivered to the Dayton-Wright Co. As an indication of the attitude of the people who have taken that machine and changed it from what it was, I cite the case of one of our very best flyers who admits but boasts that he has made 3,600 changes in that machine after a man like De Haviland has developed it to the point where it was when it arrived over here.

Q. Now, who is that officer?

A. I believe he is a lieutenant colonel now.

Q. Now, is the Hall-Scott motor?

A. Yes, sir. The same man.

Q. Now, Mr. Hall is the designer of motors, but has he had any experience

in working on aircraft? Not only that, but he has never been in touch with the flyers who have been actually flying at the front.

Q. He has been permitted to make those changes in the De Haviland 4

A. Yes, sir. That is, I am not saying that he made them. He boasts that he made them, that he has made 3,600 changes.

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

Q. Now, what is this: He is Lieut. Col. E. V. Clark, of the

A. Yes, sir. He is Lieut. Col. E. V. Clark, of the

else that produced machines that reached you excepting these DH-4's?

Col. PATRICK. Yes, sir; with the single exception of some of the parts of the Handley-Paige machines, which did reach England?

Mr. FREAR. Was this one of the troubles that you found over there, Colonel, in regard to the various planes, that they would be shipped upon different boats, so that when you were ready to assemble them you did not have the complete parts?

Col. PATRICK. No, sir; that difficulty did not confront us.

Mr. FREAR. That is in the testimony before the Thomas Committee and others and was one of the serious complaints raised; and if I recollect it was confirmed by cablegrams, that parts of the machines would go by different boats, and, consequently, when it came to the period of assembling they were not ready to complete the machine.

Col. PATRICK. I cabled several times that they were not sending over spare parts enough.

Mr. FREAR. This was in regard to the various parts of one of the machines, that the repair parts would come at different times.

Col. PATRICK. I do not recall that now.

Mr. FREAR. The committee will now take a recess until 2 o'clock.

(Thereupon, at 12.20 o'clock p. m., the committee took a recess until 2 o'clock this afternoon.)

AFTER RECESS.

The committee met at 2 o'clock p. m., pursuant to the taking of recess.

TESTIMONY OF COL. MASON M. PATRICK, CORPS OF ENGINEERS—Resumed.

Col. PATRICK. May I say, Mr. Frear, before you start, that I should like, if possible, to have the opportunity to put in the correct figures as to the flying officers, etc., because I had to trust to my memory this morning?

Mr. FREAR. I shall be very glad to have you do so. Let me see, at the outset, Colonel, if we have a correct understanding of the aircraft situation in France at the time of the signing of the armistice, subject to any corrections, of course, which may be required. At that time the United States had approximately 51,000 men in France in the air service, apart from the officers?

Col. PATRICK. Correct.

Mr. FREAR. The officers numbered 7,726, engaged in various occupations?

Col. PATRICK. Yes, sir.

Mr. FREAR. We had 740 planes in service?

Col. PATRICK. Yes, sir.

Mr. FREAR. With 744 pilots and 457 observers?

Col. PATRICK. And 23 aero gunners.

Mr. FREAR. Yes; and 23 aero gunners? And we had total troops in France to the number of about 1,250,000 on the line?

Col. PATRICK. Up at the line. That is not the total number of rifles that we had actually in action at any one time. I hope that is understood.

Col. PATRICK. Except
formance I mean we pro-

Mr. FREAR. We tried
found it was an entire

Col. PATRICK. So I

Mr. FREAR. They had

Col. PATRICK. They
are using a number of
night bombing, and also
on the DH-4. They
Sopwith-Camels; they

Mr. FREAR. I am
Do you know what they
by Mr. Clark at that time

Col. PATRICK. Col.
him; I do not know.

Mr. FREAR. Can you

Col. GORREL. The
was the DH-4; for night
and what the third one
had made a recommen-

Mr. FREAR. Then
stood, were not trained

Col. GORREL. The
third one now. He

Mr. FREAR. Those

Col. GORREL. Yes

Mr. FREAR. He

Col. GORREL. O
mistaken, was
Gnome engine.

Mr. FREAR. T

Col. GORREL.

Mr. FREAR.

were put into p

Col. GORREL.

Mr. FREAR.
stand. These

order for 3,000

Col. GORREL.

Mr. FREAR.

Col. PATRICK.

We got some

Mr. FREAR.

have spoken

Col. PATRICK.

Mr. FREAR.

ceded, and a

back—they

then put in

reached the

Col.

will concede that he was a man of some experience whose would be entitled to some weight?

TRICK. I should think so, sir.

AR. Now, I desire to read next from the statement ofenberg.

What is the object of reading these statements into the

AR. The object is to bring them right into juxtaposition opinion of a man who says that the De Haviland 4 was a machine for us, and before I get through I think you will see any of the testimony.

followed informal discussion which the reporter was directed

AR. The situation which confronts this committee is, that the Hughes committee took 17,000 pages of testimony; the committee took 5,000 pages of testimony, or thereabouts, about 400 witnesses. In the time that this committee can work it will be a physical impossibility to examine one number of witnesses with the work that we have before possibility to get all these men now, but here is the who were sworn, men who are experts in their line, able interrogators.

objection to it, I now offer the statement of Maj. rg, taken before the Thomas committee, July 30, me 2 of the hearings, beginning on page 1005. object to that testimony on the ground that he here, and the opportunity for cross-examination to this committee.

can will overrule the objection, and if there by, we will decide upon it. I am going his testimony when I get through.

by Senator New, by Senator who were at the hearing. Surely and they were interested in this

be myself plain. My idea is testimony produced before us.

to anything we can hear have no opportunity for

less some further action

at Dayton?

AR.

1.

of May--May 10 or 12.
Army, Maj. Muhlen-

1908.

Mr. FREAR. That is understood; yes. I just want to get the facts as nearly as we can at this time, and if there is any correction you desire to make afterwards do not hesitate to tell us.

The French had at that time about 1,500,000 men?

Col. PATRICK. With the same provision that that was not the exact number of rifles—that was the number of troops at the front.

Mr. FREAR. And the French had 3,321 planes?

Col. PATRICK. Yes, sir.

Mr. FREAR. The British had about 900,000 men at the front?

Col. PATRICK. Not counting the rifles; that is right. That is my recollection, subject to correction, please, from my records. That is as nearly as I can remember it now.

Mr. FREAR. The British had about 1,758 planes?

Col. PATRICK. That, I assume, is correct, sir.

Mr. FREAR. I am quoting the figures as you gave them. Of the 740 planes that the Americans had at the front at that time, 213 were De Haviland 4s?

Col. PATRICK. That is correct.

Mr. FREAR. Which you state were, in your judgment, very valuable and necessary machines. Is that right? Would you so consider them, or do you care to make a qualification?

Col. PATRICK. I considered them serviceable machines; yes, sir.

Mr. FREAR. I spoke from memory this morning in regard to the testimony of Col. Clark. Col. Clark, according to the Secretary of War, is considered one of the first aviators, as far as his judgment is concerned and as a machinist and engineer, I understand.

Col. PATRICK. I understand that is his reputation; I do not know him personally.

Mr. FREAR. Col. Clark testified before the Thomas committee on July 16, 1918, when he was asked about this De Haviland 4, this machine that uses the Liberty motor and the machine which we have been discussing.

Prior to that, just let me make another suggestion along the lines of the remark this morning, that Col. Clark stated that when he went to France in June—I will read the statement that he makes. He says that he recommended by cable six different machines. He says:

There were six military types distinct as regards the military functions, and it so happened that three were British, two were French, and one Italian. Probably a week or two after action had been started on my recommendation, the French commission in this country, for instance, heard that action had been started and called on Col. Deeds and Gen. Squier.

That is not important. He says the French commission did the same. [Reading further:]

Senator NEW. Will you state what the six types of machines were which you recommended and the purposes for which each type was designed: that is, which were scout planes and which were pursuit planes and which bombing planes, etc.?

Col. CLARK. For day bombing I recommended the DH-9, to take the Liberty 12-cylinder, direct-drive engine—redesigned accordingly. For observation work—that is, control of artillery fire and photography over tactical area, etc.—the so-called corps or Army observation machine, I recommended the Bristol-Fighter redesigned to take the Liberty engine.

Of course, those contracts were canceled after we had spent something like \$6,000,000. [Continuing reading:]

For a single-seater pursuit, I recommended the Martinsyde to take the Liberty 8-cylinder engine. As a single-seater combat, I recommended two types, both the

Spad, one with 150 horsepower Gnome engine and the other with 180-horsepower Hispano-Suiza engine, and for night bombing I recommended the Caproni triplane.

The CHAIRMAN. Were those recommendations of yours made with the approval of Col. Bolling?

Col. CLARK. Yes, sir. In fact, they were made in a cablegram sent as a result of conferences that we held daily and nightly over in France. I was assigned the duty by Col. Bolling to decide on these various types, and he sent through my recommendations.

Senator NEW. Have we built any airplanes in this country for service at the front?

Col. CLARK. Yes, sir.

Senator NEW. What type or types?

Col. CLARK. The DH-4 is the only one I know of.

Senator NEW. Is that type successful, do you think?

Col. CLARK. No, sir; except in a very limited sense.

Senator NEW. Why? Just give us your ideas now of the reason why it is not?

Col. CLARK. The attributes in which it fails or the reasons for failing?

Senator NEW. Both the attributes in which it fails—and I would like to have your opinion as an expert and as a flyer of the DH-4, and if it has defects that disqualify it in any degree I would like to know just what they are. Tell us freely what you think of it.

Col. CLARK. In the first place, I think that for the military functions which it should perform in France the performances are not as good as they should be. It is barely good enough to cope with the situation as it stands to-day; and will certainly not be good enough in a few months to stand up and take its part evenly with the German machines. By performances I mean the ceiling and the high speed at high altitudes and the rate of climb. Then, the DH-4 is a machine that this year hardly fits in any place. It is not a bomber. It has not the proper compartments in the fuselage to carry the bombs and release them. It is not a fighter. Vision for the pilot is very poor and the means of communication between the pilot and observer are very poor. Those two things are absolutely essential in a fighter. It is not a good observation machine for the same reason that it is not a good fighter.

The CHAIRMAN. You say it is not suited for observation. That is because the seats are too far apart?

Col. CLARK. That is one contributing factor; yes, sir. That covers the performance and the military attributes of the machine. In the matter of details, we have not a satisfactory radiator for it. In the first place, we found it very difficult to cool the Liberty engine in the De Haviland 4. The radiators we have built have been of rather poor workmanship. The machines which we have shipped abroad have been very unsatisfactory to them over there, aside from other reasons, on account of the poor inspection. The workmanship was poor. The ailerons and tail surfaces were fitted on very loosely. The excersiser cord that serves as a shock absorber for the landing gear was wound poorly.

Senator NEW. You say they have been unsatisfactory in the service over there. How do you know that?

Col. CLARK. I have seen two reports, one a cablegram from Col. Dood, who was assigned the duty by Gen. Foulois of investigating the merits and demerits of the De Haviland 4 as we have sent it over, and another report I have seen from Capt. Hucks, of the British Royal Flying Corps, who was assigned the duty of testing the first De Haviland 4 with the Liberty engine which was flown in England. Both these reports indicate that the machine is very unsatisfactory as it is now built. You asked me to what I attributed the fact that the machines are more or less unsatisfactory?

Senator NEW. Yes.

Col. CLARK. I believe that in the case of the De Haviland 4 there are two primary contributing factors. One is that the engineers who were placed in charge of the redesign and development of the machine neither had any knowledge of the fundamentals of airplane design, either by education or experience, nor did they have any knowledge of what the military flyer actually doing service at the front needs—what his actual requirements of the machine are. I think that no man ought to be assigned to the developing of a service airplane unless he has had some dealings with fighters at the front. I mean that he ought to get that atmosphere. If they do not get the fighter's attitude, they will, for instance, be making fittings throughout the machine which are very easily to build, from the production standpoint, but which will be just a little bit heavier or offer more head resistance to the air. By the time you get through you will have practically ruined what was a good machine by loading it down and adding this resistance. For instance, in the case of the De Haviland 4. That was designed by Capt. De Haviland, who is a very highly educated aeronautical

engineer, and he has had years of education and experience, and who—over there in England—

Senator NEW. He is an English officer?

Col. CLARK. He has been appointed an English officer. Before that he was first in the royal craft factory as an engineer and later with the Aircraft Co., which is the company which makes the De Haviland machines. Over in England now he is in a position to be constantly in touch with the flyers at the front. He interviews every man that comes back who is thoughtful about analyzing the conditions at the front. He uses that information in the development of his machines. The De Haviland 4 and all the De Haviland machines are a consequence of that man's labor along that direction. Not only that, but the De Haviland 4, as it was turned over to us, was a highly developed machine. The first De Haviland 4 built was very poor, like all other machines—the first experimental ones of new types. They found glaring faults, corrected those faults and built a sufficient number, until the machine had reached a high point of development through eliminating these faults. This machine—the acme of refinement—came over here and was turned over to men who have not the slightest education in aeronautical engineering and have not in the slightest degree the flyers' viewpoint.

Senator NEW. The De Haviland machine was sent over here for use as a model?

Col. CLARKE. Yes, sir.

Senator NEW. To whom was it delivered?

Col. CLARK. To the Dayton-Wright Co. As an indication of the attitude of the people who have taken that machine and changed it from what it was, I cite the case of an officer who not only admits but boasts that he has made 3,600 changes in that machine after a man like De Haviland has developed it to the point where it was when it arrived over here.

Senator NEW. Who is that officer?

Col. CLARK. Maj. Hall. I believe he is a lieutenant colonel now.

Senator NEW. Of the Hall-Scott motor?

Col. CLARK. Yes, sir. The same man.

Senator NEW. Maj. Hall is the designer of motors, but has he had any experience as a designer of aircraft?

Col. CLARK. Absolutely none. Not only that, but he has never been in touch with flyers; certainly never with the flyers who have been actually flying at the front.

Senator NEW. He has been permitted to make those changes in the De Haviland 4 machine?

Col. CLARK. Yes, sir. That is, I am not saying that he made them. He boasts that he has made them; that he has made 3,600 changes.

Col. Clark's position is this: He is Lieut. Col. E. V. Clark, of the Air Service. He says in his testimony:

Col. CLARK. At the present time, sir; I am on duty with the Technical Section in the office of the Director of Military Aeronautics.

Senator NEW. How long have you been in the service?

Col. CLARK. Fifteen years.

The CHAIRMAN. Whom do you mean by the Director of Military Aeronautics?

Col. CLARK. Gen. Kenly.

Senator NEW. Through what avenue did you go into the military service?

Col. CLARK. I am a graduate of the Naval Academy, sir, of the year 1907. Two and one-half years after graduation I transferred as a second lieutenant in the Coast Artillery, and in 1913 I was appointed in the Aviation Section.

Senator NEW. You are a military aviator?

Col. CLARK. Yes, sir.

Senator NEW. Not a junior aviator?

Col. CLARK. A military aviator.

Senator NEW. How long have you been flying?

Col. CLARK. Five years, sir.

Senator NEW. Have you had any particular education, training, or experience to fit you as an engineer for airplane designs; and if so, what?

Col. CLARK. Before I had an opportunity to start to learn to fly I studied the theory of airplane design and the principles of flight as much as I could out of such text books as there were at that time. When I started to learn to fly I attempted to analyze the flights I made and the flights that my associates made. In September, 1914, I was sent as the only Army officer attending a post-graduate course in aeronautical engineering, both theory and practice, of airplane design, at the Massachusetts Institute of Technology, and immediately after that I was put in charge of the experimental and repair department of the Aviation Section, which was at San Diego; and since June, 1915, I have been the chief aeronautical engineer in the Army.

Now, we will concede that he was a man of some experience whose judgment would be entitled to some weight?

Col. PATRICK. I should think so, sir.

Mr. FREAR. Now, I desire to read next from the statement of Maj. Muhlenberg.

Mr. LEA. What is the object of reading these statements into the record?

Mr. FREAR. The object is to bring them right into juxtaposition with the opinion of a man who says that the De Haviland 4 was a valuable machine for us, and before I get through I think you will see the relevancy of the testimony.

(Here followed informal discussion which the reporter was directed not to take.)

Mr. FREAR. The situation which confronts this committee is, virtually, that the Hughes committee took 17,000 pages of testimony; the Thomas committee took 5,000 pages of testimony, or thereabouts, covering about 400 witnesses. In the time that this committee can give to the work it will be a physical impossibility to examine one-third of that number of witnesses with the work that we have before us. It is an impossibility to get all these men now, but here is the evidence of men who were sworn, men who are experts in their line, examined by very able interrogators.

If there is no objection to it, I now offer the statement of Maj. H. C. K. Muhlenberg, taken before the Thomas committee, July 30, 1918, set forth in volume 2 of the hearings, beginning on page 1005.

Mr. LEA. I would object to that testimony on the ground that he has not been produced here, and the opportunity for cross-examination has not been extended to this committee.

Mr. FREAR. The chairman will overrule the objection, and if there is any appeal to be taken, why, we will decide upon it. I am going to ask the general's criticism of his testimony when I get through.

Maj. Muhlenberg was examined by Senator New, by Senator Thomas, by various other Senators who were at the hearing. Surely those gentlemen are men of ability, and they were interested in this very proposition that is before us.

Mr. LEA. I do not know that I make myself plain. My idea is this: We have to pass judgment on the testimony produced before us.

Mr. FREAR. Oh, not that at all.

Mr. LEA. Now, if a man wants to testify to anything we can hear him and examine him, but not where we have no opportunity for examination.

Mr. FREAR. The objection is overruled, unless some further action is to be had. [Reading:]

Senator NEW. Maj. Muhlenberg, you are now stationed at Dayton?

Maj. MUHLENBERG. At the Wilbur Wright Field; yes, sir.

Senator NEW. At the Wilbur Wright Field?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. In what capacity?

Maj. MUHLENBERG. Commanding officer, testing department.

Senator NEW. How long have you been there?

Maj. MUHLENBERG. I have been there since about the 12th of May—May 10 or 12.

Senator NEW. How long have you been in the United States Army, Maj. Muhlenberg?

Maj. MUHLENBERG. I entered West Point in 1904, graduating in 1908.

Senator New. You are a graduate of the Military Academy?

Maj. MUHLENBERG. Yes, sir.

Senator New. Are you an engineer?

Maj. MUHLENBERG. No, sir.

Senator New. You are not an engineer?

Maj. MUHLENBERG. No. I was assigned to the Infantry and served in the Infantry three years, and then four years in the Ordnance Department, then two years in the Infantry, and then I was assigned to the Signal Corps in October of last year.

Senator New. What machine is undergoing inspection and observation at your field?

Maj. MUHLENBERG. We have completed the standard performance test of the De Haviland 4 and are now working on the standard performance test of the standard M Defense single seater and the English-built Bristol fighter with the 300-horsepower Hispano-Suiza motor in it.

Senator New. It is with special reference to the De Haviland 4 that I wish to examine you at this time. What is the De Haviland 4 machine?

Maj. MUHLENBERG. It is a two-seater machine for three purposes: A day bomber, a fighter, and a reconnaissance machine, showing a different load for each of these three duties.

And then they went on and said practically what we know to be the facts in regard to it. [Continuing reading:]

Senator New. Major, a great deal has been said lately about the character and qualities of the De Haviland 4 machine. I want to ask you some pretty direct questions concerning it. Are you satisfied from your observations with the present condition of the De Haviland 4 machine?

Maj. MUHLENBERG. No, sir. It is by no means the machine we want for a fighter nor the machine we want for a bomber. As a reconnaissance machine, and, possibly, as an artillery observation machine, it would be all right, but certainly not as a fighter nor as a bombing machine. It will not fill the bill of either one. Of course it is the only plane that approaches a fighter plane now in full production, and necessarily I would not advocate stopping its production at all, but the minute a better fighter can be produced, or a better bomber can be produced, that plane should take the place of the De Haviland for those purposes.

Senator New. Then, what are its defects as a bomber?

Maj. MUHLENBERG. As a bomber, it has a ceiling of 15,800 feet. That is the maximum ceiling. The service ceiling is very close to 15,000 feet. That means the ceiling at which the rate of climb is less than 100 feet per minute. That is about 15,000 feet. Now, as a day bomber, the ceiling should be better than 15,000 feet.

You say that is not necessary, as I understand?

Col. PATRICK. Yes.

Mr. FREAR (continuing reading):

It should be considerably better than that, because hits have been known to have been made by antiaircraft batteries at 15,000 feet altitude. The best ceiling, as I say, of the De Haviland 4 is 15,800 feet. In addition to that, the De Haviland carries at the present time 75 gallons of gasoline. Its consumption, at full throttle, is 37 gallons per hour, so it carries about two hours' fuel at full throttle, which is a very limited capacity for a bomber, unless that bomber is to be employed immediately around the airdrome from whence it comes.

But of course it is not; it is going to cross the enemy's lines, I assume. That is, I suppose a bomber is expected to cross the enemy's lines?

Col. PATRICK. A bomber is supposed to cross the enemy's lines; yes, sir.

Mr. FREAR (continuing reading):

In addition to that, in the trials which were recently made at the Wilbur Wright Field, in dropping bombs, there was considerable difficulty experienced in maintaining communication. The proper kind of communication between the pilot and the observer was difficult. The pilot is so far from the observer that they have to communicate by interphone, and that is not the best means of communication. The best means of communication would be by touch, where the pilot would be immediately in front of the observer, and the observer could point him in the right direction, so as to enable him to drop his bombs.

Another thing is this: The pilot is so situated in between the wings that he can not see the object at the proper time, just before the observer picks it up. The pilot should first pick it up, and the observer should pick it up far enough in advance to set the bomb right at the proper time. As the target comes under the leading edge of the lower wing, the pilot loses sight of it and the observer does not pick it up until it is too late to set the sight from the end seat.

Senator NEW. Isn't that a very serious defect in a day bomber?

Maj. MUHLENBERG. A very serious defect; yes, sir. We overcame it to some extent by putting a negative lens immediately in the rear of the pilot's right foot, so that he could see something; but that was only an expedient, and I believe it panned out fairly well.

Senator NEW. In other words, the vision of the pilot is so interfered with by the structure of the machine that it impairs its efficiency as a day bomber?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. Is there any other defect that detracts from its efficiency as a bomber?

Maj. MUHLENBERG. Structural defects only, that show that it is not constructed strongly enough for the load that it carries. It may be built to carry it without accident, but there are certain structural defects in it that should be remedied, even for use as a fighter, and more so for use as a bomber, where it carries that heavy load.

Senator NEW. You spoke of structural defects there that impair its strength. Do I understand you to mean that you think the machine is not strongly enough built?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. To answer the purpose for which it is designed to be used by our forces?

Maj. MUHLENBERG. There are three or four points in which it is not strong enough.

Senator NEW. What are those points—the structural points?

Maj. MUHLENBERG. I have a photograph here showing the nose of the machine without the motor. You can see it here [indicating on photograph].

Senator NEW. You have handed me a card bearing two photographs, numbered 521 and 522.

Maj. MUHLENBERG. Yes, sir.

Senator NEW. Please tell us just what these photographs represent.

I do not care to continue that, but there are three, four, five, or six pages of further criticism in which he proceeds to discuss it. But here is the point I wish to refer to, because it is really important and relates to the testimony taken this morning. [Reading:]

Senator NEW. Maj. Muhlenberg, you spoke some time ago of the gasoline supply carried by the De Haviland 4 as being insufficient for use as a day bomber?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. Seventy-five gallons, I think it was, you said it carried?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. Which would give it approximately two hours' radius?

Maj. MUHLENBERG. Yes, sir.

Senator NEW. How much gasoline should a day bomber carry; that is, what radius should be afforded to a day bombing machine to make it acceptable for that purpose?

Maj. MUHLENBERG. As I understand it, in Europe, the aerodromes are, speaking aeronautical distances, fairly close to the lines, and if a ship were not to go too high before going over the lines, an hour's fuel out and an hour's fuel back, would probably be sufficient for day bombing, but it takes the De Haviland 48 minutes, approximately, to get to its ceiling. Its ceiling as a bomber is 15,800 feet. It ought to get to that ceiling before it goes to the lines to function as a day bomber. Therefore, there is over three-quarters of an hour's fuel that is gone before it can function at a proper altitude. It then has an hour and 13 or 14 minutes of fuel left. That is at full throttle. It has, in fact, an hour and about 12 minutes to go and come.

Senator NEW. About an hour and 12 minutes?

Maj. MUHLENBERG. Yes, sir. You would consume 48 minutes' worth of gasoline in getting your altitude before the day's work could be started at all. That would leave only about an hour and 10 or 12 minutes, approximately, of gasoline to do the work with.

Then he makes further criticisms, which I do not care to refer to here because I do not wish to take the time of the committee unnecessarily.

That is from a man who was in the war. Col. Clark was at the front part of the time. Now, here is another man who was at the front. He is a man whose book, from which I wish to ask you some questions, the Secretary of War tells us is one of the most interesting books he ever read and one of great value; I do not remember just his language. I am going to read now from Capt. Eddie Rickenbacker's book. We tried to get him, let me say, and it was impossible. We expected to have some aviators here to-day, and we had one here Saturday, Congressman LaGuardia, whose judgment and whose opinions as expressed by him, were, I think, substantially the same as Rickenbacker's. Rickenbacker says, on page 14:

The Germans knew better than our own countrymen at home knew just how difficult would be our preparations for a really important force of aeroplanes. They had seen the spring months pass; and instead of viewing with alarm the huge fleet of 20,000 aeroplanes sweeping the skies clear of German Fokkers, they had complacently witnessed the Fokkers occupying the air back of our lines whenever they desired it, with never an American plane to oppose them.

You recollect, do you not, General, that that statement was made, that 20,000 planes were to come over there before the American troops were there? That has been put in the record elsewhere. You have heard that statement?

Col. PATRICK. I will say this, Mr. Frear. I went over just after the war started, and of the statements made here I have very little knowledge. I know very little about it.

Mr. FREAR. Let me say at this time, General, that I concede that you are not to blame for any of these conditions.

Col. PATRICK. I was not referring to any blame. Whether such a statement was made or not I do not know; I have no doubt it was.

Mr. FREAR. Let me say that in Rickenbacker's book throughout, in nearly every case, he says he rises to the ceiling at from 15,000 to 16,000 feet, and he finds it necessary to do so. I will give his reason in a few moments. On page 21 he says:

Our altitude was to be 16,000 feet; our patrol was to extend from Pont-a-Mousson to St. Mihiel and we were to return at 8 o'clock—a two hours' patrol.

Later on he gives the reason for that. Here it is. He had been up—let me say I never saw this book until this afternoon, and have glanced through it hurriedly, so you will pardon me for not knowing its contents better.

Col. PATRICK. Surely; I have not seen it myself.

Mr. FREAR. He had been up to 19,000 feet. On page 86 he says:

But I was well inside enemy territory and only 10,000 feet above ground. It was quite possible that while I had been occupied in this fight other enemy planes had gathered overhead and were preparing to wreak vengeance. Personal safety and the elementary rules of aerial fighting require the pilot in such circumstances to "regain altitude, or get back to the lines as soon as possible."

On page 148 he says:

It was at this time that we heard rumors of a new English fighting machine called the Snipe. Like the Camel, it was a Sopwith production. A new engine that was shrouded in much secrecy and mystery was reputed to have carried this little scout machine to the incredible altitude of 33,000 feet. And the speed with which it made this climb broke all the world's records. Our boys of Ninety-four Squadron were naturally desirous of providing themselves with a quantity of these wonderful machines and then trying a few combats with the Richthofen Circus Fokkers.

For the present, however, we had to take what was given to us. We felt that we were not fulfilling the expectations of the people back home, who had been told that

we had 20,000 of the best aeroplanes in the world, and all made in America. The truth is that not one American-made fighting machine came to the front until the war was ended.

This ace, I believe, killed over 20 of his opponents.

Col. PATRICK. He had 26 victories, I think. I decorated him; I gave him the distinguished-service cross.

Mr. FREAR. Yes; he speaks in very high language of that occasion, General, in this book.

On page 191 he says:

The third famous fighting squadron of the Germans, Jagstaffel No. 3, was at that time under command of Capt. Bettenge, an air fighter celebrated in Hunland not only for his 25 victories but for his great success as a trainer of adroit air fighters. This squadron occupied an aerodrome back of St. Quentin. While usually engaged with British antagonists farther north, this squadron frequently made its appearance opposite us during the hottest days of fighting in our sector.

Thus it became evident to us that we American aviators were at last to meet the very choicest personnel of the enemy air forces. Not only would these experienced pilots be mounted upon superior machines, but they had been trained to fly in such close formation that they need fear no attack until they themselves were ready to accept combat.

And the suggestion is there that they were opposed to machines that were much stronger or much better adapted to fighting than the one he was using. He was using a Spad throughout the fighting, I understand. He refers to the Spad machine, which, I understand, was the best machine our fighters had at that time. He does not criticize that, except to say that he was up against a stronger machine. On page 192 he continues:

And they had consolidated here in such numbers that every time we crossed the lines we found the sky full of them; 94 Squadron at that time had 17 pilots and 24 aeroplanes available. Squadrons No. 95, No. 27, and No. 145 had approximately the same number each. No other American fighting squadrons were then assisting us in the defense of this sector.

* * * * *

Consequently the few American squadrons who were suddenly plunged into the thick of this ferocious conflict at Chateau-Thierry found that they were overwhelmingly outnumbered, poorly supported, and lamentably equipped, both in machines and experience.

Then he speaks of the equipment of our own boys there. On page 209 he says:

By August 8, 1918, our whole squadron was fitted out with the machines which we had so long coveted. The delight of the pilots can be imagined. In the meantime we had lost a number of pilots on the flimsy Nieuports, not by reason of their breaking up in air, but because the pilots who handled them feared to put them into essential maneuvers which they were unable to stand. Consequently our pilots on Nieuports could not always obtain a favorable position over an enemy nor safely escape from a dangerous situation. The Spads were staunch and strong and could easily outdive the Nieuports, and our antagonists opposite the Chateau-Thierry sector were, as I have indicated, the very best of the German airmen. How greatly our new Spads increased our efficiency will be seen from the results which followed.

Page 239 [reading]:

Later, crossing the Moselle, about 4 miles north of Pont-a-Mousson, I noticed considerable antiaircraft shelling up in the direction of Metz. I climbed higher and scanned the sky for machines.

Here they come. A large flotilla of American "flaming coffins," as their pilots called the Liberty machines, were coming home at 12,000 feet, after a bombardment of Metz. And just behind them and a little above were four very fast moving Fokkers. I stuck up my nose and began climbing for the sun.

Page 337 [reading]:

Thousands and thousands of German troops had been unloaded from trains during the previous night and were now hidden in Grand Pre and its neighborhood. The enemy fighting machines were out in force to defend this spot against bombing planes until these troops had an opportunity for moving and scattering themselves along their front. From every side Fokkers were piquing upon the clumsy Liberty machines which, with their criminally constructed fuel tanks, offered so easy a target to the incendiary bullets of the enemy that their unfortunate pilots called this boasted achievement of our Aviation Department their "flaming coffins." During that one brief flight over Grand Pre I saw three of these crude machines go down in flames, an American pilot and an American gunner in each "flaming coffin" dying this frightful and needless death.

Again, on the same page [reading]:

The second combat occurred just a few minutes later. The last of the Liberty bombing machines had passed over the lines or had crashed in flames and I thought the day's work was over, when I noticed something going on to the east of me, in the region of Bantheville. I began climbing and speeding forward to get a look at this performance, when to my surprise I discerned that one of the Liberty machines had been left behind and was in very evident distress. Fortunately, there was but a single enemy Fokker on his tail. The Yankee pilot was kicking his machine about and the gunner at the rear was managing to keep his enemy at bay, when, at a favorable elevation above them both, I found an opportunity to pique down and catch the Fokker, unaware of my approach. The Liberty motor, I discovered, was almost dud. It had either been struck by a bullet or had developed some interior trouble of its own. The pilot had all he could do to maintain headway and avoid the maneuvers of his enemy. Each time he banked the Liberty it fell downwards two or three hundred feet. The Fokker had only to worry him enough and the American machine must drop into German territory, a captive.

That is a book that I imagine, with careful examination, might reveal some very serious criticisms of the Liberty motor and the De Havilland 4, from a man who above all was a fighter and presumably qualified to pass judgment from the standpoint of a fighter. Would you not say that, General?

Col. PATRICK. Rickenbacker was a very splendid officer, sir, and a very brave one.

Mr. FREAR. Is it true that these three machines that he saw there were, as he says, all "flaming coffins"?

Col. PATRICK. I have not the slightest doubt, sir.

Mr. FREAR. Then that was not an unusual experience?

Col. PATRICK. No, sir; that was not specially unusual.

Mr. FREAR. Then Rickenbacker in making a special incident of that was mentioning something that was really an ordinary circumstance?

Col. PATRICK. He was mentioning something that was not unusual. Many planes came down in flames, sir.

Mr. FREAR. Presumably Rickenbacker saw as much real fighting as most of the men in our service?

Col. PATRICK. Presumably.

Mr. FREAR. Would you say he saw more than you, General?

Col. PATRICK. Oh, yes; more than I did.

Mr. FREAR. You were not in the air fighting?

Col. PATRICK. No; I was not.

Mr. FREAR. And the air fighting was as frequently over the enemy's lines as around the aerodromes?

Col. PATRICK. Oh, more frequently.

Mr. FREAR. And that is one of the things that demonstrates the bravery of those men. Congressman LaGuardia stated Saturday they were afraid of nothing; that all they needed was a machine

that was capable of carrying them. At least, that was Rickenbacker's judgment.

This has not been placed in the testimony—I refer to the Pershing telegram—but it will be reproduced here, and I ask you at this time, General, if you know who canceled the Spad contract for 3,000 Spads?

Col. PATRICK. I know nothing whatever about the Spad contract for 3,000 Spads, Mr. Frear.

Mr. FREAR. The reason I ask is because you said you were over there in charge of the work.

Col. PATRICK. Pardon me; I was not in charge of the air service at that time, sir.

Mr. FREAR. Oh, I see; there was a contract for 3,000 Spads with the Curtiss Co. canceled shortly after it was made, and six months later we undertook the manufacture of 1,000 Spads.

Col. PATRICK. I saw something to that effect, but that was long before I had had anything to do with the air service.

Mr. FREAR. I have here the Pershing cable of June 23, 1918. The war was then pretty well along. I will read only several paragraphs here to get your judgment as to these 60 different objections here chronicled against this engine, some of which, I assume, are not very material. [Reading:]

No check cables have been applied to check axles from forceful striking threats of running gear V-struts which are permitted to strike ground, crashing machines in landing.

Would you say that was important?

Col. PATRICK. Not especially, sir.

Mr. FREAR. You would not think it was important that the struts are permitted to strike the ground, crashing the machines in landing?

Col. PATRICK. That whole telegram was framed, as I say, in my office and after an examination of the machine. There are a number of those defects, many of them, which are quite minor. Many of them, most of them, could be corrected in France. We cabled it over because we were not sure the people engaged in manufacturing, lacking somewhat in experience—we were uncertain whether they would discover them or not, and so the cable was made as full as possible, to call attention to anything large or small that could be bettered here and save us trouble there.

Mr. FREAR. Let me digress for a moment and read a telegram of June 29, 1918, signed by Pershing, in which he says:

Changes in Liberty engines and DH-4 planes to make them fit for use at the front have been fully set forth in previous cables and in reports taken by Lieut. Gorrell. It is not possible to make alterations of planes and engines here on a large scale.

Col. PATRICK. I wrote that myself, sir. On a large scale we could not make alterations in planes and engines.

Mr. FREAR. Would you still say this defect was not important?

Col. PATRICK. Yes, sir.

Mr. FREAR. What would you say as to paragraph 2? It says:

Liberty motor is defective, indicating shop inspection not satisfactory. Lincoln apparently better than Packard.

That is rather a fundamental condition, is it not?

Col. PATRICK. The fault found with the first few motors that came over, particularly with the Packard, was that there were fragments of

metal filings, etc., in places where they should not have been and where it was distinctly apparent that there was a faulty inspection. That subsequently was cured, and the motors came over in very good condition.

Mr. FREAR. Would that answer the statement that the Liberty motor is defective? Is that a defect in the motor, or just simply in the method of inspection?

Col. PATRICK. It was defective in that we could not use it as it came to us.

Mr. FREAR. Subparagraph A of paragraph 2 says:

Open carburetor inlet not safe and neither British nor French will use them. Imperative arrange gasoline tightly piped to carburetor and drain it outside fuselage.

Here is a carburetor inlet that is not safe, and neither the British nor the French will use it—

Col. PATRICK. That was probably the most serious defect in the Liberty engines that were sent over. We at once corrected it by getting the proper drainage, and cabled the United States to that effect.

Mr. FREAR. The ignition of the Liberty motor was by the Delco system?

Col. PATRICK. Yes, sir.

Mr. FREAR. What would you say of that as compared with European machines?

Col. PATRICK. It was a magnificent motor, Mr. Frear. It was probably our greatest contribution to aviation during the war.

Mr. FREAR. You mean after the war?

Col. PATRICK. No; I really mean during the war.

Mr. FREAR. How many machines did you have in service with Liberty motors during the war?

Col. PATRICK. I had sent to the front 667 for use on the front line, and I had probably about 500 others at the schools.

Mr. FREAR. And there were 213 De Haviland 4's on the fighting front on the date of the armistice?

Col. PATRICK. Some had been crashed then, and there were others sent to the front and ready to go into action.

Mr. FREAR. By the way, the British and the French would not use them. Were the American soldiers using them?

Col. PATRICK. No, sir; we changed them.

Mr. FREAR. Subparagraph B says:

Flight tests in England supervised by Capt. Munford indicate zenith 52 carburetors not satisfactory and cheaply made but better results from Claudel.

Col. PATRICK. That was subsequently corrected and they tried the Claudel carburetor on them, and it did not do as well as the Zenith. Thereupon the Zenith was put back and found to be better.

Mr. FREAR. Was it cheaply made?

Col. PATRICK. I think not, sir; not especially cheaply made.

Mr. FREAR. Reading again, from subparagraph D:

Copper tube vents for oil tanks should be five sixteenths inch. Oil tanks burst in service because this tube is too small.

Col. PATRICK. That was true of the first motors sent over, sir, and that was corrected.

Mr. FREAR. (Reading:)

Subparagraph N. Present system main gasoline tank under air pressure should be changed because of danger from fire and because if punctured above liquid level by rifle bullet pressure is lost. Suggest enlarging needle valve on carburetor and altitude adjustments and use of gravity feed tanks in upper wing or pumps between tanks and carburetors. Overflow for gasoline from upper tanks should be conducted to point at least 6 feet from exhaust and visible by pilot. One plane destroyed by fire due to this defect.

Was that corrected?

Col. PATRICK. We corrected it as rapidly as possible, and we were endeavoring to put in another gasoline feed system. Let me say, however, that up to the very last day of the war the French used that same pressure feed in their Spads, similar to the Spads that Rickenbacker used.

Mr. FREAR. There is no evidence of the Spads having had that experience or coming down as "flaming coffins." Is this the part that relates to that?

Col. PATRICK. Yes, sir.

Mr. FREAR. How many machines did we have corrected so that this defect did not exist?

Col. PATRICK. I can not tell you the precise numbers.

Mr. FREAR. Any that were used at the front?

Col. PATRICK. I do not think we had any of those that were sent to the front that had been corrected before the hostilities ceased.

Mr. FREAR. Then, if that is the case, all these machines contained this defect that is referred to here by Gen. Pershing's telegram of June 24, 1918, and up to November 11 no change was made in this, which was one of the most material objections?

Col. PATRICK. It was an objection. But, as I say, the French used precisely the same system in their Spads that we used in the De Haviland 4.

Mr. FREAR. Did they have their machines protected in any way?

Col. PATRICK. No, sir; and many of the Spads came down in flames likewise.

Mr. FREAR. Was the Spad a faster machine, or what was it in comparison?

Col. PATRICK. Somewhat faster.

Mr. FREAR. So it was easier to handle. Were not those all advantages that were not true of a slower-moving machine?

Col. PATRICK. They were advantages which were not true of a slower-moving machine; yes, sir.

Mr. FREAR. And consequently the seriousness of it was not so apparent with the Spad as it would be with the De Haviland 4, which was a slower and heavier machine? Is that correct?

Col. PATRICK. Substantially correct; yes, sir.

Mr. FREAR. Reading again:

Subparagraph D. Sight mountings for fixed guns light enough and * * * require special tools to attach. Aldis ring sight mountings inconveniently placed, can not be used by pilots.

Was that changed?

Col. PATRICK. We changed it; yes, sir.

Mr. FREAR (reading):

Paragraph 4. Synchronizing gears entirely useless.

Col. PATRICK. As they came over first that was true. That was corrected also, sir.

Mr. FREAR (reading):

Subparagraph A. Reservoir badly made: must all be replaced. Low-pressure valves in very bad condition. High-pressure cylinder cuts cup leathers, due to bad machining. Several high-pressure springs have broken; apparently defective. High-pressure pipe connections broke in several cases; badly designed.

What does the situation there show?

Col. PATRICK. The fault that was found with that was corrected likewise, after we came to know the motors. As I say, the later motors that came over were exceedingly satisfactory.

Mr. FREAR. In that respect?

Col. PATRICK. In all other respects.

Mr. FREAR. You are referring to the motor alone?

Col. PATRICK. Yes.

Mr. FREAR. Not to the plane as a whole?

Col. PATRICK. No, sir.

Mr. FREAR (reading):

Subparagraph B. Gear arrived filled with grit, with cup leathers dried up and useless, and with all three-way valves leaking.

Col. PATRICK. That was due to lack of inspection, sir.

Mr. FREAR. You judge from the way the machines came there that the inspection was rather defective?

Col. PATRICK. I judged from the way the first machines came there that the inspection was rather inclined to be defective.

Mr. FREAR (reading):

Subparagraph C. No spare parts or special tools for synchronizing gear. These gears absolutely useless and can not be repaired here.

What was done with those?

Col. PATRICK. We got other gears.

Mr. FREAR. But you had no spare parts or special tools for synchronizing gear?

Col. PATRICK. No, sir; they had to send them over.

Mr. FREAR. It says here:

None of the above planes can be used until some of the above changes are made, causing vital delay in program.

That was true, was it not?

Col. PATRICK. Quite true, sir.

Mr. FREAR (reading):

Subparagraph C. When operating this far from base of supply it is essential that defects which are discovered by inspection in the United States be corrected there.

Col. PATRICK. I wrote that sentence myself.

(The telegram referred to is here printed in full, as follows:)

TECHNICAL SECTION FOR INFORMATION,

June 24, 1918.

(Received June 26, 1918.)

(For Director, Military Aeronautics.)

Paragraph 1, copy to Chief of Ordnance.—DH-4 plane has been carefully examined. Plane structure has been found defective as follows:

Subparagraph A. Rubber cords for shock absorbers incorrectly made: rubber strands not put under sufficient tension before covering with braiding. Result is that estimated weights too much for under load.

Subparagraph B. No check cables have been applied to check axles from forceful striking threats of running gear V. — struts which are permitted to strike ground, crashing machines in landing.

Subparagraph C. Tail plane is of old type and should be braced with stream line tubes extending from leading edges to lower longeron of fuselage. Possibly this old type tail plane should be replaced by new type made of all spruce and having no joints near curves in leading edges. With new type tail plane stream line tubes will not be necessary.

Subparagraph D. Wood screws have been used in various places instead of bolts, notably on washer plates at points where tail advancing without tubes passes through fuselage and on wing skid fastening.

Subparagraph E. Nuts have been omitted in securing bolts.

Subparagraph F. Bolts, shackles, and cotter pins throughout the machines are in many cases loosely and badly fitted.

Subparagraph G. Cotter pins have been substituted for buffers.

Subparagraph H. Wing skids badly fitted and ash packing blocks omitted.

Subparagraph J. Main compression ribs in the main plane are of hollowed-out type with 3-ply web. These should be solid spruce to prevent flange from bulging up.

Subparagraph K. No fairing placed between double fly wire. All these wires should be of stream-line type and not of cable.

Subparagraph L. Washers under fixing bolts of ailerons pulleys wheels omitted, allowing aluminum packing to penetrate into ribs at leading edges.

Subparagraph M. Tail skid shock absorber wound so tight that skid throws great strain on cross members of fuselage. Rubbish plate for this skid extends only about 6 inches compared with 18 inches extension fitted in England.

Subparagraph N. There is one-eighth inch extension fitted in England.

Subparagraph O. There is one-eighth inch play in hinge of tail plane. This fitting should be made snug to take all play away.

Subparagraph P. Cotters and split pins were used in adjustments of tail hinge instead of bolts and nuts.

Subparagraph Q. Stream-line covers were omitted from fin and empennage.

Subparagraph R. In center section main plane fixing bolts are a very loose fit in spar.

Subparagraph T. Wrapping of wire terminals in some cases bad.

Subparagraph U. Pilot's wheel on tail planes should be bolted and not secured with lag screws.

Subparagraph V. Ashes temporarily have been omitted from axles, which break.

Subparagraph W. Air speed indicator heads are heavy and glassy and this instrument is virtually worse as at present fitted.

Subparagraph X. Cables and pulleys should be thoroughly greased, and not come dry.

Subparagraph Y. Such thing as jammed pulley wheels and joints in landing gear structure show faulty inspections.

Paragraph 2. Liberty motor is defective, indicating shop inspection not satisfactory. Lincoln apparently better than Packard.

Subparagraph A. Open carburetor inlet not safe and neither British nor French will use them. Imperative arrange gasoline tightly piped to carburetor and drain it outside fuselage.

Subparagraph B. Flight tests in England supervised by Capt. Munford indicate Zenith 52 carburetors not satisfactory and cheaply made, but better results from Claudel.

Subparagraph C. Water pipe from bottom radiator to pump should be moved to starboard to clear oil strainers.

Subparagraph D. Copper tube vents for oil tanks should be $\frac{1}{8}$ inch. Oil tanks burst in service because this tube too small.

Subparagraph E. Vent for radiators must have a tube leading water where it can not blow on spark plug or pilot and vent should not be in radiator caps.

Subparagraph F. Oil tubes from tanks to pumps must be 1 inch or larger and plug for draining oil tanks should be 1 inch. The present sizes will not work in cold weather.

Subparagraph G. Gasoline tube to carburetors not secure against vibration and hose connections to carburetors not secure against detachment. Small pieces of rubber have been found in gasoline tubes and have caused forced landing. There should be strainers in carburetors.

Subparagraph H. Priming tubes and thermometer tubes over manifold should be placed so as to leave carburetors accessible.

Subparagraph J. Oil tubes between cylinders should be secured to crank case.

Subparagraph K. Interchanging positions of switches and all high-speed indicators so that switch operates with left hand and close to control lever.

Subparagraph L. Engine control lever and mounting not rigid enough.

Subparagraph M. Battery boxes do not protect against short circuit.

Subparagraph N. Present system main gasoline tank under air pressure should be changed because of danger from fire and because if punctured above liquid level by rifle bullet pressure is lost. Suggest enlarging needle valve on carburetor and altitude adjustments and use of gravity feed tanks in upper wing or pumps between tanks and carburetors. Overflow for gasoline from upper tanks should be conducted to point at least 6 feet from exhaust and visible by pilot. One plane destroyed by fire due to this defect.

Paragraph 3. Following defects have been found in armaments:

Subparagraph A. Scarf mounts for Lewis guns badly designed; vertical release should not operate until after horizontal release. Regarding arrangements necessitates gunner supporting entire weight of magazine and gun when turning mounts.

Subparagraph B. Quadrant scarf mounts entirely too light; guns jump badly when fired.

Subparagraph C. Fixed gun mount fastenings inaccessible and not properly locked in place. Removal and replacement of fixed gun destroys alignment of barrels. Gun can not be adjusted so that barrels are parallel to line of flight and still permit line of sight to clear radiator.

Subparagraph D. Sight mountings for fixed guns light enough and * * * require special tools to attach. Aldis ring sight mountings inconveniently placed, can not be used by pilots.

Subparagraph E. Oil cover Aldis sight does not stay open.

Subparagraph F. No side doors in ammunition boxes for arrangement of ammunition.

Subparagraph G. Fastenings of ammunition boxes not secure.

Subparagraph H. Front-sight brackets Lewis gun will not stay in place.

Paragraph 4. Synchronizing gears entirely useless.

Subparagraph A. Reservoir badly made; must all be replaced. Low-pressure valves in very bad condition. High-pressure cylinder cuts cup leathers due to bad machining. Several high-pressure springs have broken, apparently defective. High-pressure pipe connections broke in several cases, badly designed.

Subparagraph B. Gear arrived filled with grit, with cup leathers dried up and useless, and with all three-way valves leaking.

Subparagraph C. No spare parts or special tools for synchronizing gear. These gears absolutely useless and can not be repaired here.

Paragraph 5. Bomb carriers not sent with planes. We understand that these are in transit.

Subparagraph A. Sample bomb carrier sent by courier has no release mechanism or device to steady bombs.

Paragraph 6. Marlin guns not in good condition; require a careful inspection and overhauling.

Subparagraph A. Many Marlin guns have defective gear springs. Great variation in length of action spring Marlin guns cause variation in rate of fire.

Subparagraph B. No spare parts for armaments received.

Paragraph 7. None of the above planes can be used until some of above changes are made, causing vital delay in program.

Subparagraph A. Planes sent here must be inspected and thoroughly tested before being shipped.

Subparagraph B. Appropriate spares, too, must accompany them.

Subparagraph C. When operating this far from base of supply it is essential that defects which are discovered by inspection in the United States be corrected there.

PERSHING.

Mr. FREAR. Now, here is the situation, General, and I ask your opinion of it. I have given you the statement of Col. Clark and Maj. Muhlenberg, who were very familiar, apparently, with the mechanism of this machine, who passed judgment on it and who not only say it was not satisfactory but condemn it for bombing purposes and as a fighter. Here is the opinion of a man who was the ace of all American aces, who describes the machine and who unquestionably condemns it.

We had 213 of these De Haviland 4's on the fighting line at the last. There were 740 machines all together, you have testified, for an army of 1,250,000 men, when if we had been up to the required proportion for which you had asked for the 3,000,000 men we ought to have had

3,400 machines. Would you say now, as I understood you to say in the first place, that 740 machines are a sufficient number for that army?

Col. PATRICK. I said that was a very insufficient number.

Mr. FREAR. Pardon me; I misunderstood you.

Col. PATRICK. I said that was below what we should have had, very far below.

Mr. FREAR. I think that is all.

Col. PATRICK. May I make a statement?

Mr. FREAR. Surely.

Col. PATRICK. I would like to say this, that the De Haviland 4 plane undoubtedly had some defects; it was not a perfect machine. Other machines and improvements upon that were made while it was in process of production and afterwards. The testimony of both Col. Clark and Maj. Muhlenberg, I should like to point out, was given before these planes had been tested by us on the front at all. I took the planes when they first came over, and after making many of the alterations that were described in the cable I sent them up to the front and had them tested out by our own pilots, and I declined to send the planes to the front for use over the front lines until I had a report from them that they believed them to be safe.

Furthermore, I sent one of the planes over to England. The plane was examined by Capt. De Haviland, whom Col. Clark praises in high terms. And Capt. De Haviland inspected this first American-built plane and stated that its construction was superior in many respects to that of the English. We did have installed in it an air-pressure system for the gasoline tank, which was following out the French practice as used on the Spad. The English used a nonpressure-pump system, and just before the armistice this nonpressure-pump system was being installed in our American De Haviland planes. It was reported to me that no greater percentage of our De Haviland 4 planes came down in flames than of any other type of plane used on the front.

That is all I care to say, sir.

Mr. FREAR. Just let me make this inquiry. Gen. Pershing's telegram was June 24?

Col. PATRICK. June 24.

Mr. FREAR. The testimony of Col. Clark was on July 15, at least three weeks after. The testimony of Maj. Muhlenberg was more than a month after, on July 30.

Col. PATRICK. And the first De Haviland planes were used in actual fighting across the lines on the 2d of August.

Mr. FREAR. On the 2d of August, three days after Muhlenberg testified as to their defects?

Col. PATRICK. Yes, sir.

Mr. FREAR. So you are satisfied that the De Haviland 4 was a good machine?

Col. PATRICK. Yes, sir.

Mr. FREAR. For fighting?

Col. PATRICK. I said this morning that the De Haviland 4 was a reconnaissance machine, not essentially a fighting machine, and was not essentially a bomber. I should say that the De Haviland 4 when it was recommended for production here was the best plane of that type on the western front.

Mr. FREAR. General, we had an army on the front almost as large as the French Army on November 11, 1918?

Col. PATRICK. Yes, sir.

Mr. FREAR. We had 1,250,000.

Col. PATRICK. Yes; a million and a half in round numbers.

Mr. FREAR. They had 3,300 machines and over, and we had 740. If they could furnish us the machines we needed, as you said, as rapidly as they were needed, why did they not furnish them?

Col. PATRICK. We did not have the men to man them.

Mr. FREAR. The fault was not with the machines but with the air service and the training?

Col. PATRICK. The fault was in the training rather than anything else. I did not have trained men enough to put on the machines I could get. I was lacking men all the time. We were doing all we could in France in our own training schools, and I was spurring them up constantly. It must be remembered that it takes months to turn out a flyer.

Mr. FREAR. But here is the point I do not understand. It takes two machines for every aviator, you said, and you only had 740 there in the service, which would seem to me to indicate that you did not have enough to supply 740 aviators?

Col. PATRICK. I had a number of these De Haviland 4's back in storage. Seven hundred and forty was the number of aviators as well as the number of machines that I had actually on the front—confining myself to a specific statement of the facts. I had other machines in store, not only De Haviland 4's but pursuit planes and others.

Mr. FREAR. What do you mean by pursuit planes?

Col. PATRICK. Spads.

Mr. FREAR. How many planes did you have all told—tell me how many Spads you had there November 11?

Col. PATRICK. Three hundred and thirty.

Mr. FREAR. Observation planes, 293; day bombers, 117; night bombers, 0. That made the total of 740. Did you have any Spads outside of those?

Col. PATRICK. Besides those 330? Oh, yes, sir. We had Spads ready to replace any of those Spads that should be crashed. The Spads were coming in from the French very rapidly, right along.

Mr. FREAR. Then the reason we only had 740 machines on the front was because we did not have men trained?

Col. PATRICK. Because I did not have a trained personnel that could go to the front and fly them.

Mr. FREAR. We had been in the war then for over a year and a half?

Col. PATRICK. We had. I insisted that before our pilots went to the front they should have the most thorough training. They were given more thorough training than either the French or English. They were very fit to fly when they reached the front. I insisted also that they should not cross the lines until they had had some training on the machines they would actually fly. I felt it was very much better to spend some time in training them than, under any circumstances, to send men in who were not fit to fly.

Mr. FREAR. Do you think the judgment of aviators like LaGuardia and Rickenbacker would be of value as to the usefulness of the De Haviland 4?

Col. PATRICK. I really do not know what Maj. LaGuardia's experience with the De Haviland 4 has been. I know him; I saw him in France.

Mr. FREAR. He drove the Caproni, the Italian machine, most of the time.

Col. PATRICK. Yes, he was down in Italy; I do not know whether he has had any experience with the De Haviland 4 or not.

Mr. LEA. I believe he testified he never rode in one and never saw them operated on the western front.

Col. PATRICK. I do not know. I do not know whether Maj. Rickenbacker ever flew the De Haviland 4.

Mr. FREAR. He probably did not want to from his own statement.

Col. PATRICK. He was brave enough to fly anything, sir, but he was engaged in a very different type of aviation from that; he went into bombing. I think he is a man of very good judgment; I should be very glad to take his judgment on almost any question of that kind.

Mr. FREAR. Would you say that Meissner is a man of good judgment?

Col. PATRICK. I do not know him.

Mr. FREAR. He was flying, and Rickenbacker refers to him quite frequently.

Col. PATRICK. I know his name, but I do not know him personally. I do know Rickenbacker personally.

Mr. FREAR. I believe that is all.

Mr. LEA. General, how long have you been in the military service?

Col. PATRICK. I entered West Point in 1882. That means I have been nearly 37 years in the military service, sir.

Mr. LEA. And in what section of the service were you engaged at the beginning of the war?

Col. PATRICK. I was in the Engineers. I took an Engineer regiment to France.

Mr. LEA. And how long did you remain in the engineering service?

Col. PATRICK. I was promoted to brigadier general a very few days after reaching France. The commander in chief then placed me in charge of engineering instruction in the entire Army. I kept that for only two or three weeks when I was made what was then called chief engineer of the lines of communication. Those are intrusted with all of the instruction work in France. I remained in that capacity until I was made chief of the Air Service in May, 1918.

Mr. LEA. What, if anything, have you had to do with the Air Service before you were placed in charge in France?

Col. PATRICK. Nothing.

Mr. LEA. What date was that that you were placed in charge?

Col. PATRICK. My recollection of the date is the 29th of May, 1918. It was some time in May, and I think it was the 29th.

Mr. LEA. Now, at that time there had been no American-made planes delivered to France?

Col. PATRICK. It is possible that one De Haviland 4 may have been received in France during the month of May.

Mr. LEA. The criticisms quoted by Mr. Frear in the telegram sent to America referred to what machines?

Col. PATRICK. To the De Haviland 4 plane and the Liberty motor.

Mr. LEA. How many had been sent over at that time?

Col. PATRICK. That was another figure I can not tell you. I have the figures of the receipt of those planes by every week and month. We had enough of them by the time that cable was sent, the 24th of June, to have made a very thorough examination of those that had been received. The precise number I can not say.

Mr. LEA. It was a limited number, was it not?

Col. PATRICK. A limited number.

Mr. LEA. Had any of them been used on the front at the time the cablegram was sent?

Col. PATRICK. No, sir.

Mr. LEA. Now, with what success did you secure improvements of the defects in the engine?

Col. PATRICK. In the engine? The engines subsequently came over to us greatly improved. I mean the minor defects to which we had called attention had been wiped out, and the engines as received later were in excellent condition and were a very efficient motor.

Mr. LEA. Only a limited number of engines had been sent over at that time?

Col. PATRICK. A very limited number.

Mr. LEA. Do you know how the number of deaths among American fliers compares with the number in the aviation services of the other allies?

Col. PATRICK. I have the figures for both French and English. I hesitate to speak from memory about that.

Mr. LEA. Have you them here?

Col. PATRICK. I am afraid not, Mr. Lea. That is such an important question you can understand my hesitancy to give those figures from memory?

Mr. LEA. You can supply the figures for the record?

Col. PATRICK. I can supply the figures for the record later and tell exactly what our losses were and exactly what the French losses were during the entire war. I can give you the losses of the English during at least the five months of actual fighting of 1918.

Mr. LEA. Then I will ask that when this record is turned over to you that those figures be inserted at this point.

Mr. FREAR. There is another question that I think might fit right in there. If I remember correctly, the colonel's statement is that 120 odd men were killed in actual fighting, and about 240 were killed by accidents, and 260 odd by accidents here?

Col. PATRICK. Those figures were not correct; no, sir.

Mr. FREAR. Could you furnish those figures?

Mr. LEA. And the injuries?

Mr. FREAR. I would like to have those too, yes.

Col. PATRICK. I have that very completely worked up; every casualty that happened to any one of our flying officers.

Mr. FREAR. Have you that worked up to show whether it occurred through a defect of the machine or the fault of the men?

Col. PATRICK. That is impossible. Some of those happened in training, and there we can study the case. In other cases we can not tell. With reference to the machines coming down in flames, it

is practically impossible to tell whether a machine has been struck by an incendiary bullet or whether it has been struck by antiaircraft bullets. It crashes sometimes far beyond the lines. An antiaircraft explosion is so large it will put any kind of tank out of business.

Mr. FREAR. Unless they get pretty high up?

Col. PATRICK. Well, even then.

I would like to say that I have been very careful in getting all of this data together, and I have those statistics that you asked for very fully worked out.

Mr. LEA. We shall be very glad to get them.

(The data referred to will be printed hereafter.)

Mr. LEA. How about the experiences of our allies compared with ours with reference to the difficulty of finding a satisfactory machine and unsatisfactory conditions of both aeroplanes and engines?

Col. PATRICK. The allies themselves from the very beginning of hostilities in 1914 had met with a series of difficulties and disappointments in the development of their aviation programs. In general their difficulties and failures were in many respects similar to those of the United States. A complete knowledge of the conditions and capabilities of the aeronautical factories was for a long time not available to the respective governments. There was not adequate and definite government supervision of manufacture. When we remember our own experiences with the Liberty engine and all other aviation equipment produced in the United States, it is not surprising to note that a number of like circumstances occurred during the development of allied aviation from the meager foundation existing in 1914.

I am quoting from my own report to Gen. Pershing.

Mr. LEA. Have you anything more specific on that?

Col. PATRICK. The difficulties which we encountered in our attempt to develop night bombing are curiously paralleled by those of the French, British, and Italian air services. It follows that the air programs of any two nations will show a remarkable similarity until more fundamental and precise knowledge of the science of aviation is available. The mistakes made can not be considered unusual nor avoidable. Each disappointment and each failure of judgment might have been, and in many instances was, duplicated in the case of every warring nation.

Mr. LEA. When the United States entered the war what, if any, effort was made on behalf of our Army to take advantage of the experiences of our allies in the war with reference to aviation?

Col. PATRICK. The best answer to that is, I think, the statement that very shortly after the war started this mission headed by Col. Bolling was sent abroad to ascertain everything that it could possibly discover concerning the developments in aviation and to make recommendations to the United States based purely upon the experiences of those who were our allies in the war.

Mr. LEA. What was the nature of the work of the Bolling Commission? What was accomplished, if anything? What was done?

Col. PATRICK. May I say that the Bolling mission never finished its work. Poor Col. Bolling's life ended before I became connected with the Air Service. Col. Gorrell here probably can answer that question better than I. He can give you an answer from his personal knowledge if you will permit him to answer it.

Mr. LEA. Very well.

STATEMENT OF COL. E. S. GORRELL, AVIATION CORPS.

Col. GORRELL. The Bolling Mission sailed from the United States on the 7th of June, 1917, and went to England, arriving at Liverpool June 26. They immediately went to London. The mission, let me state, was made up of naval and Army members and civilian experts, and about 93 or 96 mechanics whom we took over with a view to placing them in European factories for the purpose of obtaining such knowledge as is not found on their drawings. The drawings pertaining to European aircraft are very hazy, very defective, and very insufficient. Most of the knowledge is found in the heads of workmen—certain tolerances, certain clearances, and certain principles, etc., they do not commit to writing. That is why we took these men over, for the purpose of putting them into the factories.

We landed in England, and Col. Bolling and myself and Mr. Marmon immediately got in touch with the political side of aviation in England. The rest of our mission went out to the fields and the factories and investigated the factories and the flying fields. They talked to the flyers and everybody else, and in the evenings we would all get together with the flyers.

In that way, between the 26th of June and the morning of the 2d of July, we covered the question of what was going on in England. We received excellent help in every way from the English. They turned over to us everything we asked for, and we started a shipment of those things to the United States on the 4th day of July. So they worked pretty fast.

Mr. LEA. What kind of material was that?

Col. GORRELL. I can't remember exactly what was in all the boxes.

Mr. LEA. Right in that connection, so that we will understand: Was it the idea to send over to America inventions founded on British experience for the use of our mechanics?

Col. GORRELL. Not exactly. We were sent to England to pick up that which should be built in the United States, and the recommendations of that board were supposed to be the things that would be built in the United States. After we had been in England for some time we had an idea what we would pick if there was no place on the face of the earth except England, and no material to choose from but English stuff, and it came down to half a dozen machines, different types of engines, methods of mounting guns, and synchronizing guns, etc. In order not to lose time in case we should later decide that was what we should pick, we asked the English to ship that stuff to the United States, and, the question of royalties being involved, we pledged our word that the United States would not open those boxes until they received our final decision. In that way we got advance shipments to the United States of things that we might decide upon.

Then we went over to Paris, some of us going by boat, and some by air, and got in touch with the French Ministry of Aviation and the French flyers. We went all through the factories there thoroughly and then came to a conclusion as to what we would pick if there were only the British and the French machines to choose from. Then we asked the French to ship to the United States the things that we wanted for our men. Those shipments were somewhat delayed, for various reasons, which I will explain if you wish.

Mr. LEA. I wish you would.

Col. GORRELL. The question was one of royalties. The French wanted money for what they had developed. The British turned their material over to us and said, "we will talk about the money after the war," but the French wanted money, and we did finally have to pay them a certain sum later on.

We went from France to Italy and got in touch, likewise, with the Italian Air Minister and went over the problems with them, and then went to the Italian front, getting in touch with the flyers and people in command. Coming back from Italy some representatives went to the French front, and also to the English front. Col. Clark and myself went to the English front and saw the big drive in the summer of 1917, and the use of aviation in that drive.

In that way we had covered the three countries from the point of view of their air ministers, from the point of view of their factories, from the point of view of what they could produce, and then from the point of view of what they were doing on the front.

The following fall we got together in Paris with British representatives, whom they picked from their front and from their ministry so they could see what was being done at the front and what was capable of being done in the factories. We got together with the French ministry at the front and the Italian representatives, in what was later called an interallied aircraft committee on convention. We asked them for suggestions, and those three nations agreed with us on the selection of what should be built in the United States. In addition to those men under Col. Bolling there had gone to Europe with Gen. Pershing when he sailed, an air service officer to be upon his staff with Col. Bolling. His name was Col. Dodge.

Mr. LEA. Would this be a convenient time for you to tell what was agreed on?

Col. GORRELL. Just one second. The men who were on Gen. Pershing's staff were aviators whom he had picked to go with him, whom he had got from the schools, and Gen. Pershing's men agreed, and the opinion of our mission plus the opinion of the men with Gen. Pershing, plus the opinion of the three other nations was agreed to without dissention; and as I remember it, trying to think back about 24 months, the agreement was that we would take them up by classes first. First, as to the observation class and the day bombing class we eliminated every class of machine until we came down to two, the Breguette, a French plane, and the De Haviland 4 an English plane. The French agreed we had better build the De Haviland, and that was also the viewpoint of our mission. So you have the De Haviland as being the universal recommendation of our allies, plus those of us who were sent over to see what to build.

Mr. LEA. On what date was that agreement reached?

Col. GORRELL. That was in the last half of July 1917.

Now, the De Haviland 4 was only to be built, generally speaking, as a stop gap until we could get the De Haviland 9 and build the De Haviland 9. We all recognized at that date that the De Haviland 9 was the machine we desired rather than the De Haviland 4 but we realized, likewise, that the Germans would not stop the war and wait for us to build the De Haviland 9 of which the designs were not completed at that time, and of which the British themselves did not

know all the details. In other words, the De Haviland 9 was more desirable but it was not ready for production, and, therefore, we were to build the De Haviland 4 until we could get the De Haviland 9 to the United States and then build a Chinese copy of it.

Mr. LEA. But it was for England to develop the De Haviland 9?

Col. GORRELL. Yes; but we expected at that date that the development would be only a matter of a month or so, to get the wings and everything as they would finally be.

Mr. LEA. How much time did it require as it developed?

Col. GORRELL. I can not recollect as to the final development.

Mr. LEA. I mean before they were put into quantity production.

Col. GORRELL. I shall have to check that up, sir. They did not arrive in quantity on the British front, I will say, until along about the summer of 1918, I think.

Mr. LEA. Can you give the specific dates as to that by looking them up?

Col. GORRELL. We would better get that from the British mission. I would think.

Mr. LEA. I wish you would kindly get that, and when you do get it, let it be inserted in the record.

Col. GORRELL. The date the De Haviland 9 reached the British front?

Mr. LEA. The day it reached quantity production.

Mr. FREAR. It was some time in July?

Col. GORRELL. No, sir; not July, 1917.

Mr. FREAR. Of 1918?

Col. GORRELL. I think it was in the summer of 1918; I do not know whether it was July or June.

(The data referred to will be printed hereafter.)

Col. GORRELL. Now, if I may go on, that brought us down to the class of machine we wanted for daylight bombing only. What we had in our minds at that time for observation purposes was not the De Haviland 9; that we had in mind to get was the Bristol Fighter, in which the seats were closer together, in which visibility was better. But you know the situation as to the Bristol Fighter better than I do.

Mr. FREAR. What kind of engine did they use in the Bristol Fighter?

Col. GORRELL. They at one time contemplated putting in the Hispano-Suiza of the small type, like the 220, possibly. At another time they contemplated the Hispano-Suiza 320, and finally put in the 320 Rolls-Royce.

So the Bristol Fighter was what we recommended for observation purposes, French and Italian and all, as being the machine we wanted for observation purposes.

Then the question of a two-place fighter came up, and we were enthusiastic to get the two-place fighter—I mean a two-place pursuit machine. I ought not to use that word “fighter.” May I suggest that the use of that one word “fighter” is causing more trouble than anything else in the aviation world. Every machine is a fighter at times. If you go up in the air you must fight. So I would suggest the use of the word “pursuit” machine for the machine that goes out and looks for fights. We do not use the word “fighter” if we can help it.

Mr. FREAR. It is generally used in connection with pursuit planes, is it not?

Col. GORRELL. It is; yes, sir.

Mr. FREAR. What did you decide on for that double-seater machine?

Col. GORRELL. The two-seater pursuit machine that we picked out was the Bristol Fighter.

Then came the question of a single-seater machine. When we first began to talk about a single-place machine it looked as if we were going to have to build a Spad. It looked as if there should be two types of pursuit machines, one with a fixed engine and one with a rotary engine, the fixed-engine machine being less maneuverable at higher altitude because of great weight, and yet it has the diving ability. The fixed-engine machine has a pretty good ceiling and has the ability to dive very rapidly upon an enemy whom he is trying to shoot down. Its engine is usually but not always more reliable than the rotary engine, and yet it has the disadvantage that it sometimes takes longer to start it. But if you want a machine for a high ceiling and very maneuverable at that high ceiling the rotary engine is best.

Mr. LEA. I was trying to get at the work of this Bolling Commission; that is all I wanted now. Of course, we have not called you as a witness yet. I would like to get at the history of that Bolling Commission, but the real thing I am after is to find out what was done in the way of cooperation between the United States and the Allies, and then to get back to the general's testimony.

Col. GORRELL. As to the nature of cooperation, I must say that Col. Bolling was a man of unusual characteristics. He made friends everywhere he went, and coming in there as a disinterested person, so to speak, he was able to weld the Allies together better than ever before. From the very first day he fought for an interallied aircraft convention, to meet at least once a month in Paris, and he succeeded in accomplishing that, and it did meet possibly once a month, and it produced very cordial relations, the closest cooperation, and harmony of all kinds.

Mr. LEA. How long did that commission remain in Europe?

Col. GORRELL. That commission, as such, remained in Europe until about the end of July or the 1st of August. But I must say that on the 3d of July, 1917, when Col. Bolling went up to the front, after having arrived on the 2d, he reported to Gen. Pershing, and from that time on he was practically a part of Gen. Pershing's force, and Gen. Pershing placed him almost immediately after that in charge of the lines of communication of the Air Service. The mission, as such, while it remained together and did its work until about the end of July, left a part of its force in Europe, which carried on as a nucleus of our air service, and started the air service in the S. O. S. and lines of communication, while others, including the two naval officers who were with us, and the expert civilians, went back to the United States to carry over the important information which we had gained.

Mr. LEA. What became of the engineers who were part of the mission?

Col. GORRELL. Of the engineers, the Army sent over two, Col. Clark and myself. Col. Clark came back, and I remained in Europe. The two naval officers both came back. The civilian engineers came back, with the exception of one, who remained with me.

Mr. LEA. Not referring to your own activities, what was the qualification, generally speaking, of those men for this proposition? On what experience was it based?

Col. GORRELL. Col. Bolling was picked because he was a lawyer of great ability, and was therefore considered able to handle international questions which might arise and which did arise. Also he was a flier of no mean ability. He was a pilot. Col. Clark was picked because he was, in the opinion of all of us in the Army, our best aeronautical engineer. I was picked because I happened to be one of the four men who had taken the master of science degree in aeronautical engineering. I do not know how the two naval men were picked.

Mr. Howard Marman everybody knows as being an expert in the design of engines. Mr. Vail, of the Dodge Co., is a man whom we all recognized as being one of the best experts in this country on producing engines. Mr. Hurley, of the Midvale Steel Co., is one of the best metallurgists in this country. That, in general, is the way they were picked.

Now, the 96 mechanics who went with us were picked by the automobile industry as being their representative shopmen, who were to go into the shops abroad and learn their methods and to return to the shops here and put into use what they had learned.

Mr. LEA. Were they sent back here?

Col. GORRELL. Yes, sir; they were sent back in small squads. Each squad made a special study of a certain type of design. Most of them came back. Some of them remained with us and were commissioned. A total of 18 out of those 96, we will say, were commissioned as officers in the Army.

Mr. LEA. This mission kept making reports to this side, I presume?

Col. GORRELL. Oh, yes; they became official reports of the Air Service of the A. E. F.

Mr. FREAR. May I ask you the names of the machines you mentioned? You mentioned four, did you not?

Col. GORRELL. I mentioned the De Haviland and Bristol fighter.

Mr. FREAR. What were the two Paris machines?

Col. GORRELL. The Spad was the machine which we determined upon. The Spad Monocoque was a rotary. For the night bombing, we determined at that time, as I recollect, upon the Caproni machine.

Mr. FREAR. That is the Italian machine?

Col. GORRELL. Yes, sir.

Mr. LEA. Was there any understanding reached in reference to an effort to produce the Caproni in quantity?

Col. GORRELL. No. If I may say this right there, Col. Clark and myself were both very much pleased with the Caproni and the Handley-Paige, and after he got to England he made a recommendation, apart from the commission, that the Handley-Paige be produced in the United States and be assembled in Ireland. That did not come from our mission. And when the recommendation came from us, you had the recommendation from us for the Caproni and the recommendation from Col. Clark for the Handley-Paige. We received an inquiry from the United States whether we advocated the production of both machines, and we cabled back that only one type of night bombing machine should be produced.

Mr. FREAR. Well, he recommended the Caproni.

Col. GORRELL. And also the Handley-Paige. The Caproni was the recommendation of our whole mission, and the Handley-Paige of Col. Clark only. When they wired over to know how about this, we wired back, as I recollect, that we recommended the production of only one type of night bombing aircraft in the United States, we did not care which, whether the Caproni or the Handley-Paige.

Mr. FREAR. In his testimony he speaks of the Caproni; he does not mention the Handley-Paige.

Col. GORRELL. I think you will find the fact was that he recommended the Handley-Paige to be built in the United States and assembled in Ireland.

Mr. FREAR. He says, "For night bombing I recommended the Caproni triplane."

Col. GORRELL. Yes, sir; he did. We at first recommended the Caproni triplane, but before any damage could be done we discovered—and the Italians agreed with us—that the recommendation to build the Caproni triplane was faulty; that what we wanted really was the Caproni biplane. That was based upon the fact that the Caproni triplane is such an enormous machine that it takes a terrible amount of room to house it, you have difficulty in getting a hangar sufficiently large, and there has been difficulty at all times in taking care of them.

Then, also, from the point of view of production, we figured we could build so many more biplane Capronis than triplane Capronis that when we started to deliver bombs into Germany we would get a greater weight of bombs upon the enemy by building the biplanes. So we switched from the triplane to the Caproni biplanes, but still the Caproni machine. Also the great question of tonnage came in.

Mr. LEA. What, if any, agreement was there as to who should produce the Caproni machine?

Col. GORRELL. I do not know who was to produce it on this side of the water, sir.

Mr. LEA. Was there any attempt to produce the Caproni on this side of the water?

Col. GORRELL. I can not speak as to that, sir; I have just come back; after having been away since the 17th of June, 1917.

There is one thing I would like for you to let me say. When you go to choosing a type of aircraft to build you are up against one of the most difficult problems in the whole world. We faced this condition; here is a good illustration of that. We saw the De Haviland 4 do wonderfully satisfactory work on the front. It seemed to be the pride and joy of all the men who were flying it. It was recommended by everybody and approved by all the allied nations that we should build it. We could have later on the De Haviland 9 in its place when it was properly produced. We saw the De Haviland 4 going practically at will into the German lines. I have been in the British squadron and have had the British flyers tell me they like to fly the De Haviland. They say, "We will get up above the Germans, and we are tickled to death to have a pursuit plane come after us, because then the antiaircraft guns can not fire at us." And so they put at least one De Haviland into each of their squadrons, to go up around 22,000 feet and sit there and regulate their long-range artillery fire.

Mr. FREAR. Was it not the De Haviland 4 that we were to manufacture?

Col. GORRELL. Yes, sir.

Mr. FREAR. And we then started building the Liberty motor and building the De Haviland 4 around it?

Col. GORRELL. But, sir, the performance of an aeroplane depends upon weight in pounds per horsepower. The Liberty engine is lighter in pounds per horsepower than the Rolls-Royce. It gives you a greater horsepower.

Mr. FREAR. But in building your aeroplane you build your plane around the engine?

Col. GORRELL. Very true, sir.

Mr. FREAR. And so when these 3,600 corrections were made by this Maj. Hall, as he says, in the De Haviland 4, it was getting so it was a different machine from the one you had seen going over the lines?

Mr. MAGEE. May I make a suggestion? I understand the witnesses before this committee were to be sworn before giving evidence.

Col. GORRELL. I understand that.

Mr. MAGEE. I presume Col. Gorrell will be called as a witness. will he not?

Mr. FREAR. I presume so.

Mr. LEA. Of course, I did not intend to branch into this when we started out. I think probably we will call the colonel later, so suppose we go back to the general again.

TESTIMONY OF COL. MASON N. PATRICK, CORPS OF ENGINEERS—Resumed.

Mr. LEA. General, did the war develop any perfect aeroplane engine, in your judgment?

Col. PATRICK. I am not an expert on engines, Mr. Lea, but I think that question can be answered in the negative.

Mr. LEA. After the conclusion of the war how did the Liberty motor compare with other motors of similar horsepower?

Col. PATRICK. It was certainly the equal and probably the superior of any other motor in its class.

Mr. LEA. Can you tell me about how many parts there are in an aeroplane?

Col. PATRICK. No; I can not.

Mr. LEA. I was wondering how complicated the problem is.

Col. PATRICK. It depends upon the size of the plane, sir. It is very complicated, of course. There are a great many parts; I do not know how many.

Mr. LEA. Were the English using the De Haviland 4 at the conclusion of the war?

Col. PATRICK. They were.

Mr. LEA. And do you know if they were still making the De Haviland 4 at that time?

Col. PATRICK. I am satisfied they were still making it, but they expected to "wash it out," as they called it, and replace it with the De Haviland 9 very soon thereafter.

Mr. LEA. Was that the policy of the American Army?

Col. PATRICK. Absolutely the same thing, sir. Precisely. It was the best we could get at that time, with the expectation of getting something better.

Mr. FREAR. That was the De Haviland 4 with the Rolls-Royce engine?

Col. PATRICK. The English were using the Rolls-Royce, but they were eager to get the Liberty engines.

Mr. FREAR. I understand, but that makes the record right.

Col. PATRICK. I would like to add to that, sir, that they were preparing to put the Liberties in their De Havilands as soon as they possibly could.

Mr. FREAR. But it was in service when the Bolling Commission went over there, and they had not put the Liberty motor in then, had they?

Col. PATRICK. Oh, no, sir.

Mr. LEA. Was the Liberty motor installed in any foreign-made machines before the conclusion of the war?

Col. PATRICK. It was tried at least in the Breguet.

Mr. LEA. And by what nation was it tried?

Col. PATRICK. By the French.

Mr. LEA. Did you get any orders for the Liberty motors after they tried it?

Col. PATRICK. May I add that the English people had tried it there in the Handley-Page machines. Yes, sir; they gave orders, but both the French and the English were especially eager to obtain as many of the Liberty motors as they possibly could.

Mr. LEA. I presume the improvements of these various types of engines used were progressive as the war continued? That is, from time to time changes were made as found necessary or advisable?

Col. PATRICK. Yes, sir.

Mr. LEA. Do you know the total number of engines produced by America during the war?

Col. PATRICK. No; I do not. I know that the total number of Liberty engines produced up to the date of the armistice was approximately 21,000, I think.

Mr. LEA. And you have not the figures on other engines?

Col. PATRICK. I have no figures on any which were produced here.

Mr. LEA. Would it be convenient to furnish those figures?

Col. PATRICK. Certainly.

Mr. LEA. I would like to have you furnish them to the reporter.

(The data referred to will be printed hereafter.)

Mr. FREAR. But I notice you say there were not 21,000 Liberty motors that could be used. The reason I asked that is because there were a good many of those Liberty motors, and the orders for the first ones, as I understood, were canceled—and the Trego Co. is one of the companies that he mentioned—because they were not made according to the specifications, or at least it was not a useful motor.

Col. PATRICK. I do not know as to that.

Mr. FREAR. That is the reason I thought that might be confusing.

Col. PATRICK. I know nothing about that, sir. I merely have in mind a figure in some particular negotiations with the French and English as to the number produced as of the date of the armistice, and my recollection is it was about 20,000.

Mr. FREAR. Would you have the names of the manufacturers so that we could trace back and see whether it was some of these contracts that were canceled?

Col. PATRICK. Those contracts are all in the office of the Director of the Air Service.

Mr. LEA. I would like to get a record of engines actually completed. Now, how many different types of engines were required for the Aviation Service beginning with the training on the battle line?

Col. PATRICK. I would rather have Col. Gorrell, who has had more experience in that than I, answer that question.

Mr. LEA. I suppose we had better pass that question, then. For what purpose was the De Haviland 4 used?

Col. PATRICK. We used the De Haviland 4 in our Air Service as a reconnoissance or observation plane, as a photographic plane also, and we used it as a day bomber.

Mr. LEA. Was there any understanding between the Allies and the United States, particularly in the early part of the war, as to what kind of machine should be produced by America and what by the other Allies?

Col. PATRICK. In the early part of the war—speaking from the records, which I have gone over with care—the Allies were insistent that the United States devote its energies to the quantity production of engines and to the larger type planes, leaving to them in Europe the production of the smaller single-place machines.

Mr. LEA. Do you know whether or not the allied program was delayed awaiting the production from us of the larger engines; that is, did they cease production expecting that we would furnish the quantity needed?

Col. PATRICK. I do not think that the allied program, as it existed when this understanding was reached, was delayed by lack of our ability to furnish engines. The allied program was rapidly enlarged as the war went on, and I suspect that the Allies built some hope upon our being able to furnish them, but I do not think it can be stated that the allied program was delayed by reason of our inability to do so.

Mr. LEA. That is, you do not think they ceased production on that expectation?

Col. PATRICK. Absolutely not; they were speeding their production up to the highest possible point at all times.

Mr. LEA. Going back to the question of the different types of planes required, as I understand it, the elementary training plane is a distinct machine from the others. What kind of engine was used for that?

Col. PATRICK. As to those questions of engines I would prefer to have them answered by someone who is an expert.

Mr. LEA. You did not have anything to do with the advanced training planes?

Col. PATRICK. Except so far as the schools over there of which I had charge used them.

Mr. LEA. Did you use the De Haviland 4 for advanced training?

Col. PATRICK. I did use the De Haviland 4 for advanced training; yes, sir.

Mr. LEA. Did you use any other American machine for that purpose?

Col. PATRICK. No, sir.

Mr. LEA. And the other training planes were principally of French manufacture?

UNCLASSIFIED//FOR OFFICIAL USE ONLY

Mr. LEA. Do you know to what extent the United States did produce in quantity engines other than the Liberty motor during the war?

Col. PATRICK. No, I can not say to what extent. The United States was working on the Hispano-Suiza, a foreign engine which had been successful, and we received some of the Hispano-Suiza engines before the war ended, but a very small number, and the production figures for the United States which were furnished us did not indicate that they would come through very rapidly.

Likewise they were working on the Hispano-Suiza 300, and it was not expected they would be able to furnish us those in quantities for some little time when the war ended.

Mr. FREAR. Do you know when the order was given?

Col. PATRICK. I do not know when the order was given.

The Breguet engine, I think, was recommended by the same mission of which Col. Gorrell has spoken, and they endeavored to put that into quantity production here. I think not one reached Europe before the war ended; there may have been two, but not more than two came over before the war ended.

Mr. FREAR. Do you know where the order was placed? How many engines were ordered?

Col. PATRICK. I am so unfamiliar with matters here that I do not know.

Mr. LEA. On what program, so far as time was concerned, were you operating when you took charge of the air service in France?

Col. PATRICK. There was no program.

Mr. LEA. Do you know if there was a production program for engines? Were they figuring on preparing for one year or two years?

Col. PATRICK. The first program, if it can be called such, that was evolved after the commander in chief reached France called for 59 squadrons. Subsequently, when our effort was to grow much larger, they added to that 201, making a program of 260 squadrons to be placed on the front. That was cabled to the United States. But as to the production program here I think none had really been fixed or settled until after I took charge, and I believe that on the very day I took charge, the cablegram stating what the United States would be required to furnish was sent over. I, of course, at that time was entirely unfamiliar with the situation, and I merely read the cablegram and passed it without being able to criticize it.

Mr. LEA. Do you remember what the program was that was cabled over that day?

Col. PATRICK. That was the 260-squadron program, which was sent over with a statement as to the number of planes that would have to be furnished, the number of engines, etc., to meet that particular program.

Mr. LEA. When did the progress of the war reach the point that you felt we were justified in reducing production, if it ever did occur?

Col. PATRICK. Reducing production? I never did think it reached that point.

Mr. LEA. Was there any time before the armistice that conditions indicated we had an unnecessarily large program?

Col. PATRICK. No, sir.

Mr. LEA. Of course I was trying to suggest the probability that the termination of the war must have been anticipated.

Col. PATRICK. Not by us, Mr. Lea. The termination of the war was rather a surprise.

Mr. LEA. Recently I have seen statements in the newspapers in reference to the burning of some aeroplanes in France. Can you give us any information on that?

Col. PATRICK. I am personally responsible for the disposition of every particle of aviation apparatus in France, Mr. Lea.

Mr. LEA. What do you know about this charge that aeroplanes were burned up wastefully and needlessly?

Col. PATRICK. That any aeroplanes were burned up wastefully or needlessly is absolutely incorrect.

Mr. LEA. Were any aeroplanes burned intentionally?

Col. PATRICK. No aeroplanes that it would be economical to retain were.

Mr. LEA. Can you give us in a general way how many aeroplanes were burned? What was the extent of the property disposed of by fire as far as these aeroplanes were concerned?

Col. PARTICK. When the armistice was declared, and hostilities ceased, we had on hand a number of aeroplanes, and others were being delivered to us. The question arose as to what should be done with this material. That was considered with great gravity by myself and, by my direction, by the officers who had charge of the supply. We cabled to the United States asking what of this material which was described in the cable they desired shipped here. We received a reply, and subsequently there came an officer from the United States who was empowered to state what of this aviation material would be useful here in the United States. We complied with the provisions of the cablegram and also with the directions, if I may call them so, given by this officer sent over for that purpose, to send to the United States certain aviation material—planes, engines, etc. We then had other engines and planes and we had to decide what should be done with them.

I must interject here that the aeroplane is rather a fragile article. It deteriorates very rapidly. Unless it is carefully stored in a building that is practically damp proof and where the temperature can be kept uniform an aeroplane deteriorates very rapidly. Aeroplanes in use deteriorate. While hostilities were in progress we had storage facilities for keeping the planes that would remain in storage for only a short space of time until they were sent to the front, and we had ample men to take care of them. But the French winter came on. It was damp. The planes were not passed through our storage places so rapidly, and they deteriorated greatly.

I appointed boards of survey, consisting of three officers of probity, officers who were thoroughly competent and upon whose judgment I relied. They inspected every aeroplane that I had in France, and recommended what should be done with it. Their recommendations in practically every case I approved.

The aeroplanes were divided more or less generally into three classes: Those that had been so injured by crashing that they were not capable of being repaired; aeroplanes that had deteriorated in storage so that they were unsafe and therefore were worthless, and aeroplanes which might yet possibly be flown, but which were practically obsolete. I would like to explain the meaning of the word "obsolete" as applied to those particular planes. They were planes which were in use up to the very time hostilities ceased, by

ourselves and by our allies, but we know they would rapidly be replaced by better planes; as, for instance, our De Haviland 4 by the De Haviland 9; the Spad would have been replaced very shortly by the English Snipe. So those planes were obsolete or obsolescent.

These boards of survey recommended in practically every case that this material which was not wanted in the United States should be sold, or in default of being able to sell it that it should be salvaged. I had a very careful estimate made of the cost of packing these planes, and found that to pack planes, at least of the larger size, costs from \$400 to \$500. It was a very costly matter to care for these planes; it took a number of men to keep them in usable condition.

There was a demand to get our men out of France, and in addition to the cost of boxing, and railroad transportation, and the very large cost of ocean transportation—for planes to be shipped by vessel take a very large amount of space—I suggested at the outset that it was the most economical thing to do with those planes, and I exercised the best judgment I had. The planes were offered for sale but there was no sale for them, and they could not be sold. I then authorized them to be taken up, and those to be salvaged to be put to one side, and get for the metal what we could get, and the wooden parts likewise were in many cases sold. I do not think there was a single plane that had a Liberty engine in it that was in condition to fly, or that could be put in condition to fly, that was thus salvaged. They were everywhere so disposed of, and were foreign planes and were more or less obsolete, and it would not have paid as a money proposition to have brought them to the United States.

The total number of planes that were salvaged up to the 5th of July I have with me—but I should like to preface these figures with one other remark: At our schools I had something over 1,000 planes, each of which had been for many hours in the air, and those planes had been worn out by fair wear and tear. Those were among this number that I shall tell you about that were salvaged. I have them by different types.

Mr. FREAR. Why not put that into the record just like it is?

Col. PATRICK. I will be glad to put it in the record as long as it has been referred to. It makes up a total of 1,058 planes.

Mr. FREAR. That were burned?

Col. PATRICK. No, sir; not burned. They were salvaged, and that means taken apart, and the metal parts laid aside and put into different piles, the different kinds of metal, Babbitt, and so forth, and that material was turned over to the sales agent to be disposed of.

Mr. FREAR. And how about the rest of it?

Col. PATRICK. The wooden part and canvas and things of that sort, I sold some by the sanction of the liquidation commission and the sales agent of the A. E. F. We could obtain no bids whatever, and some of the material was used for fuel, and some of it was burned up. I believe it was the economical thing to do.

(The statement referred to by Col. Patrick is here copied in full in the record, as follows:)

REPORT ON AIRPLANES SALVAGED IN THE AMERICAN EXPEDITIONARY FORCES AT THE CLOSING OUT OF SCHOOLS AND ARMIES AS OF JULY 5, 1919.

NOTE.—This report includes only those airplanes that were salvaged as recommended by the survey boards at the closing out of the Air Service in the American Expeditionary Forces. It does not include airplanes salvaged by the armies or schools during their active work.

Type.	Engine.	Horse-power.	Salvaged to date.	To be salvaged.		Total.
				At Romorantin.	At Third Army.	
Avre 1.	Le Rhone.	120	1	2	3	6
A. R. 2.	Renault.	190	22			22
Breguet 14A 2.	Fiat and Renault.	270	46			46
Breguet 14B 2.	Renault.	300	4	19		23
Breguet 14E 2.	Fiat.	240	44			44
Curtiss JN4.			6			6
Caudron G-3.	Le Rhone.	80	5			5
D. H. 4.	Liberty.	400	144	57	1	202
Farman F-40 ¹ .	Renault.	130	8			8
F. E. 2 B.	Beardmore.	160	1			1
Morane XXX ¹ .	Le Rhone.	120	9	1		10
Nieuport X ¹ .	do.	80	1			1
Nieuport 21 ¹ .	do.	80	8			8
Nieuport 24 ¹ .	do.	80-120	6	1		7
Nieuport 27 ¹ .	do.	80-120	6	3		9
Nieuport 28 ¹ .	Gnome Mono.	150	2	5		7
Nieuport 80 ¹ .	Le Rhone.	80	7			7
Nieuport 81 ¹ .	do.	80	70	1		71
Nieuport 83 ¹ .	do.	80	1	1		2
Roulers ¹ .	Gnome.	50	55			55
S. E. 5.	Hispano Suiza.	180		2		2
Salmson.	Salmson.	230	118	7	23	149
Sopwith A 2 ¹ .	Clerget.	130	112			112
Sopwith B 2 ¹ .	Le Rhone.	120				
Sop-Camel.	Clerget.	130	38			38
Spad 13.	do.	130	10	4	1	15
Spad VII.	Hispano.	220	147	48	4	199
	do.	220		3		3
Total.			871	154	33	1,058

¹ Used at training centers.

TABLE II.—Types of German airplanes.

Type.	Engine.	Horse-power.	Salvaged.
Albatros D 3.	Mercedes.	160	1
Albatros D 5 A.	do.	160	1
Fokker D 7.	do.	160-180	10
Fokker D R I.			1
Pfalz D 12.	Mercedes.	180	1
Roland D 6 B.	Benz.	200	1
Halberstadt CL2.	Mercedes.	180	1
Halberstadt CL4.	do.	180	1
Halberstadt CL5.	Benz.	225	1
L.V. G. C 6.			2
Rumpler C 4.	Mercedes or Maybach.	260	2
A. E. G. G 4.	Mercedes.	260	10
A. E. G. G 5.	do.	260	1
Total.			38

Source: (a) Reports of planes salvaged by survey boards; (b) telegram from A. P. C. No. 2, Romorantin; (c) statistics of Airplane and Motor Division.

Some slight changes may be required when reports have been received regarding the airplanes flown from Third Army to Romorantin. Crashes may occur which will change totals slightly.

A. D. BUTTERFIELD,
Lieutenant Colonel, Air Service,
Chief, Material Division.

JULY, 1919.

Mr. FREAR. It was not an economical thing to use propellers for fuel, was it?

Col. PATRICK. No one did.

Mr. FREAR. I understood that was done.

Col. PATRICK. I know of no such case.

Mr. FREAR. It was not according to any testimony that was taken before this committee, I will say, but I have heard of such a thing.

Col. PATRICK. I know of no such case, but if anything of that kind happened they were propellers in such condition that they were absolutely unfit for use. There were some propellers received from France that came open and could not be glued together again. Here are some photographs showing the condition of the planes [exhibiting photographs to the members of the committee]. Here are some that were not fit for anything and could not be repaired.

Mr. LEA. The idea was to strip off everything that was of value?

Col. PATRICK. My idea was to strip off everything that was worth a cent, and the rest of it to get rid of, and get the best we could for everything.

Mr. LEA. Did you find any difficulty selling the metal?

Col. PATRICK. That was turned over to the sales agent, and I understood there would be no difficulty selling the metals for as much as they would bring over here. That comes under the category of raw materials, of which those countries are in great need.

Mr. FREAR. Was there any objection to photographing affairs over there?

Col. PATRICK. I know of none. I issued no orders to that effect. I was perfectly willing that everybody over there should know everything that was going on, and I am perfectly willing that everybody over here shall know everything. I want them to know what I did with every plane in France.

Mr. FREAR. I have no doubt that that is true as to yourself, but, of course, we want to know what actually did occur.

Mr. LEA. Was there any secrecy about the burning?

Col. PATRICK. I know of absolutely none.

Mr. LEA. Was it near any camp, where any Americans had an opportunity to observe it?

Col. PATRICK. If we burned that up at any place, it was right at the camp.

Mr. LEA. Now, you spoke of sales having been—

Col. PATRICK (interposing). Col. Gorrell reminds me that there was a general order from Gen. Pershing's headquarters during the war that persons were not allowed to take photographs, of course, around the camps. But I gave no orders to prohibit anybody taking any photographs of anything after hostilities were over.

Mr. LEA. What was your method of offering this property for sale?

Col. PATRICK. Posters were put up at all near-by places, and such publicity as was possible was given to it. I also inquired of the English and French Governments whether they would buy and whether dealers would buy.

Mr. LEA. Property was only burned after you could get no bidders?

Col. PATRICK. Absolutely, and after it was of no use.

Mr. LEA. You did not have any information as to why the Spad order was canceled?

Col. PATRICK. I know nothing about the Spad order.

Mr. LEA. Do you know whether the Handley-Paige ever reached quantity production in the United States?

Col. PATRICK. I only know that we received in England parts for 100 Handley-Paige machines, and that they were coming forward in considerable quantities, but I do not know exactly how many.

Mr. FREAR. Do you mean full machines?

Col. PATRICK. No, sir. The arrangement was that the parts should be fabricated in this country and then they should be assembled and put together in England.

Mr. LEA. What, if any, contract for delivery of Liberty motors did we have with the Allies at the time of the armistice?

Col. PATRICK. At the time of the armistice it was agreed that prior to the 31st of December we would deliver to the French 1,500 Liberty motors, and between the 1st of January, 1919, and the 30th of January, 1919, we would deliver to them 4,500. Similarly with the English, the same number precisely after the 1st of January. Prior to the 1st of January the order did vary a little from the 1,500 that were to go to the French. I do not recall quite clearly what was the number; I have forgotten whether 1,200 or 1,500. But I know that after the 1st of January, 1919, both the English and the French were to receive 4,500 Liberty motors.

Mr. FREAR. Was that canceled after the armistice?

Col. PATRICK. Practically canceled by them, although both the English and the French settled up matters. I settled with the French myself all the financial business in this connection after the armistice.

Mr. FREAR. How many flying schools did we have on the other side?

Col. PATRICK. We had students at 16 different schools. I think I have the data right here; yes, we had 13 instruction centers and schools, and they attended 26 different schools, but we had of our own 16.

Mr. LEA. Did you do any training on the other side?

Col. PATRICK. Yes, sir.

Mr. LEA. Did any of the men first learn flying on the other side?

Col. PATRICK. Yes, sir.

Mr. LEA. Was that the general practice or the exception?

Col. PATRICK. No, sir; it was not the general practice.

Mr. LEA. The general practice was to give the men elementary training in America and then a few weeks' final training in Europe.

Col. PATRICK. The theory was that they should be completely trained when they left the United States. But owing to the fact that they had no single-place machines over here which were fit to give advanced training, it practically resulted in sending men over there incompletely trained—that is, with but the early training—and we had to finish them there. The plan was that they should send them over fully trained and we would only give them a fresher course of a week or two in the advanced schools, but that did not work out in practice.

Mr. LEA. It was your plan to give them training in the actual machines used at the front?

Col. PATRICK. Absolutely.

Mr. FREAR. As to the total men in the Air Service, counting the men over here, have you any statistics on that?

Col. PATRICK. I have not the figures in my mind.

Mr. LEA. Can you give us the date when, in your judgment, the Liberty motor became a practical machine for front-line use?

Col. PATRICK. I sent them over the line in DH-4 planes on the 2d day of August, 1918. That is as good a date as I can give you. Thereafter they were continually over the lines.

Mr. LEA. Did I ask you when the English began to prepare for the DH-9?

Col. PATRICK. That is a part of the data that Col. Gorrell is going to give you. But, speaking offhand, I would say they began to prepare, I am satisfied, in the spring of 1917; that is, at least from that time. Capt. De Haviland was working on the designs of that plane then.

Mr. LEA. Have you any data of the comparative losses of the DH-4 with other machines of similar type?

Col. PATRICK. None except the statements made to me by some of my own officers of the machines really brought down in flames; that the percentage of DH-4 was no greater than any other machines of similar type. I am satisfied that the losses were no greater than in other machines of similar type.

Mr. LEA. There has been a report, I think, published in the newspapers that America had adopted some machines just at the time that our allies were withdrawing them from use at the front, on the ground that they were obsolete. Is there any foundation for that claim?

Col. PATRICK. I know of no foundation for such a statement. We were always seeking the most advanced type of machine possible.

Mr. LEA. Was there any agreement between America and our allies by which we agreed to furnish them certain materials for manufacturing purposes?

Col. PATRICK. Yes, sir.

Mr. LEA. And were we able to keep that agreement?

Col. PATRICK. When you say to furnish materials for manufacturing purposes you are referring solely to aviation, are you not?

Mr. LEA. Yes.

Col. PATRICK. By the Bolling agreement, so-called, of the 30th of August, 1917, the United States undertook to furnish to France certain materials, yes; but I would like to call attention to the fact that in that agreement it was distinctly stated, in so many words, that the French, irrespective of our ability to supply those materials, was to furnish us the planes. We did send over a large amount of material that was covered by the so-called Bolling contract; in fact, we sent over 90 per cent of that material, although some of it did not reach France as soon as we had hoped for, nor as soon as the French expected it. But I repeat, by the terms of the contract itself, whether we furnished the material or not they were to furnish us the planes.

Mr. LEA. Did we furnish England any men to be used in the manufacture of airplanes or engines?

Col. PATRICK. I think not for the manufacture of airplanes. But I had 20,000 men in England when the war ceased, and there was an agreement with England by which we were to maintain 15,000 men for the training those men could receive. Incidentally they assisted the English at their aerodromes, and at their repair shops, and in their

training camps. And those men, after having spent about three months in England, and having received their practical training there, which was equal almost to training my men under front-line conditions—they were to be replaced by green men to be sent there to take their places.

Mr. LEA. Training in manufacture?

Col. PATRICK. No; in the upkeep and use of planes, and everything that the men had to learn in performing the work at the front.

Mr. LEA. About when was that arrangement?

Col. PATRICK. About December, 1917, if I recollect correctly.

Mr. LEA. Were any of those men transferred from England to the continent?

Col. PATRICK. Yes, sir; one of the first things I did after taking charge of the Air Service was to go to England, by direction of the commander in chief, and beg, or rather urge that they release some of these men. We had not yet gotten up to the 15,000 promised, but we needed them very badly in France. I went to England and did all I could to induce them to modify that agreement. It is a long story, gentlemen of the committee, but the flow of men to England ceased in the spring of 1918, after the Germans had made their great attack and when our policy became directed toward shipping infantry and machine guns as fast as we could. Therefore, all auxiliary troops were withheld and men could not come. England had expected they would be sent, according to agreement, but the result was that we had not sent the 15,000 Americans to England, and therefore I went to England to get them to modify our agreement and let me take some to France just then. And I succeeded in getting some sent over at that time, and thereafter when more green men came to England a corresponding number were released by England and came to France and served with our own Army.

Mr. LEA. Do you know how many men were released in England, in all?

Col. PATRICK. About 75 squadrons, and each squadron was composed of about 150 men. Figuring roughly, I would say something over 10,500 men.

Mr. LEA. We kept our quota in England, substantially?

Col. PATRICK. Yes, sir; substantially we kept up our quota in England.

Mr. LEA. While those men were in England they were performing necessary service in the manufacture, preparation, and repair of English material?

Col. PATRICK. They were assisting the English in that way, by assisting in the repair and upkeep of material, yes; and incidentally they were obtaining most valuable training. I have questioned a great many of those men, and almost universally they tell me that they profited very greatly by their stay in England, and were better when they reached France than they could possibly have been by training over here.

Mr. LEA. What class of work did they perform when they reached France?

Col. PATRICK. The same as they had performed in England.

Mr. LEA. Now, you had charge of the cablegrams that were sent to America in reference to supplies and operations both, did you, or were there any cablegrams sent concerning operations?

Col. PATRICK. I had nothing to do with cablegrams in regard to operations, as such.

Mr. LEA. But you did have charge in reference to supplies?

Col. PATRICK. Yes, sir; all aviation supplies.

Mr. LEA. What, in a general way, would be your answer to the criticism that is frequently made in regard to the number of cablegrams sent suggesting changes in the manufacture of engines and airplanes?

Col. PATRICK. I do not know that I gather what the criticism was.

Mr. LEA. The general idea of the public is that every little while a cablegram came from the other side suggesting this change and that change, and indicating this defect or that defect in the manufacture of airplanes or in their mechanical construction. What is your explanation of the conditions that required those changes?

Col. PATRICK. After I myself took charge of aviation matters I do not think that criticism can lie. If I recollect correctly, after this somewhat lengthy cablegram that has been quoted by your chairman, I think very few suggestions were made in regard to any changes in the method of manufacture, type, or anything else.

Mr. LEA. Those cablegrams were with reference to such initial shipments of American airplanes as were at the front?

Col. PATRICK. Yes, sir. I want to make clear, if I can, that we very strongly thought precisely the same fault we found with those planes would be detected here. But we had to take the responsibility of sending men on those planes to the front, and, also, we were not prepared to make changes in large quantities there. I did not want to risk the possibility that some of them might be overlooked here in the later planes. So we went into that with great care.

Mr. LEA. Is it your opinion that we had no greater difficulty in those matters, that is, discovering any little faults of construction, than our Allies had?

Col. PATRICK. As I stated a little while ago, sir, our experience paralleled that of our allies very closely. If anything, profiting by their experience, we did better than they at the early stages of the war.

Mr. LEA. Did the type of airplane require change, very materially, from the time you became Chief of the Air Service?

Col. PATRICK. Did the type?

Mr. LEA. Yes; did the experience that we had require any general development or change from that time on?

Col. PATRICK. No very great development from that time on.

Mr. LEA. Did it prior to that time?

Col. PATRICK. Oh, from the first crude plans of the English and the French, and during the war, the development had been very phenomenal.

Mr. LEA. At the beginning of the war what was the radius of machines that did any fighting?

Col. PATRICK. I am not familiar with what they had at the beginning of the war in the way of machines, and therefore I can not quite answer that question.

Mr. LEA. Did you have any difficulty in getting cooperation from this side of the water?

Col. PATRICK. None whatever.

Mr. LEA. So far as you know was every attempt made to conform to your wishes and the needs of the service?

Col. PATRICK. In so far as it was humanly possible to do so I think they made every effort. There were natural defects in conducting a war 3,000 miles away from the base; defects of making clear what you wanted by cable—and, gentlemen of the committee, many a time I wished I could have five minutes talk with the man over here so that I might make myself more clear than it was possible by the latter way. Those defects always existed and always will under similar conditions, but further than that I found none.

Mr. LEA. You did not meet any difficulties here from contrary plans?

Col. PATRICK. What was that question?

Mr. LEA. In plans contrary to your own?

Col. PATRICK. No; not at all.

Mr. LEA. I believe that is all.

Mr. FREAR. The war went on for two years and a half before we went in, about?

Col. PATRICK. Yes, sir.

Mr. FREAR. And we had the benefit of all their experience?

Col. PATRICK. I do not know that I could say we had the benefit of all their experience.

Mr. FREAR. It was our own fault if we did not. We sent over officers from here, didn't we?

Col. PATRICK. I think we did.

Mr. FREAR. I understood the Secretary of War to say that he sent officers over?

Col. PATRICK. Yes, sir.

Mr. FREAR. And they were over there two years and a half on the fighting front?

Col. PATRICK. So far as the information of officers was concerned, there were only five in Europe when we entered the war, and they had been there only a short time, nor had they been preceded by others.

Mr. FREAR. You were not an aviation officer, and you went over in 1918?

Col. PATRICK. No; I went over in August, 1917.

Mr. FREAR. But these other officers, even if they were not aviation officers, had been over there looking on during the conduct of the war; and this was one of the important branches of the war service, was it not?

Col. PATRICK. Oh, yes, sir.

Mr. FREAR. They discovered that very quickly after the war began. And after two years and a half of war in Europe, before we got into it, and then we were in the war for a year and a half, and notwithstanding that we got only 213 planes of American manufacture on the front, you feel that is a perfectly satisfactory result to have accomplished, do you?

Col. PATRICK. I do not feel that it was a perfectly satisfactory result; no. But I do believe it was the best it was possible to do over here.

Mr. FREAR. I understood you to say just now, and that is the reason I asked you that question, that you felt that the people over here were doing everything they could?

Col. PATRICK. I still feel they were doing everything they could.

Mr. FREAR. And they got 213 planes to you, and you think that quite an achievement, and satisfactory?

Col. PATRICK. No; I did not say it was satisfactory. I wanted many more.

Mr. FREAR. You mean from your position?

Col. PATRICK. When we say 213 we mean they were on the front at the date of the armistice. But we had received very many more.

Mr. FREAR. I understand. That was the De Haviland plane. I understood the question that was asked you was, if that was a satisfactory plane, or if it met the ordinary and reasonable demands. Wasn't that an observation plane, to be replaced by the De Haviland 9? Was it a plane that would match up with the best planes: as, for instance, the Caproni bombing plane? Or was it a plane that would match up with the Spad for pursuit purposes?

Col. PATRICK. You could not compare it with a Spad. It is a different type of machine.

Mr. FREAR. What machine could you compare it with?

Col. PATRICK. The English DH-4 that they were using at the time hostilities ceased.

Mr. FREAR. The English had used that for two years and a half before we got into the war, and yet we could not get out but 213 at the end of a year and a half after our entry into the war. We were waiting to build that around the Liberty motor, and that is the only motor that we manufactured?

Col. PATRICK. We manufactured many more of them than others, but we manufactured some others, and did send over the Hispano-Suiza.

Mr. FREAR. How many?

Col. PATRICK. Several hundred.

Mr. FREAR. Did you use them in fighting machines?

Col. PATRICK. We were to put them in the Spad machine for use, yes, sir. We were to use 300 Hispanos, which they were likewise making here, in the Sopwith Dolphin.

Mr. FREAR. The Hispano was used in fighting machines among our allies?

Col. PATRICK. The Hispano-Suiza was used in all the Spad machines.

Mr. FREAR. Those that were manufactured in this country?

Col. PATRICK. All that we used in Spads were manufactured in this country.

Mr. FREAR. Were any Hispano-Suiza engines in those machines on the front?

Col. PATRICK. I doubt it.

Mr. FREAR. Therefore you did not use any machine except the Liberty motor at the time of the armistice, I mean, of American manufacture?

Col. PATRICK. That is right.

Mr. FREAR. You said, as I understood you, that the machines were all right that you sent across the line on the 2d of August?

Col. PATRICK. Yes, sir.

Mr. FREAR. And yet on the 30th of July, three days before, Maj. Muhlenberg, had entered into a long discussion severely criticizing those machines you had there. This was only three days before that he was criticizing these DH-4's. His criticisms then were of machines that you certainly must have been using, because it would

have taken quite a long period to have gotten machines over there; at least a month ordinarily, wouldn't it?

Col. PATRICK. Yes, sir.

Mr. FREAR. So that those machines that you were sending over the lines were the very machines that he was criticizing. That is true, isn't it?

Col. PATRICK. Quite probably so.

Mr. MAGEE. I would like to ask a question. Did we own the pursuit and bombing planes used by the American forces in France?

Col. PATRICK. Did we own them?

Mr. MAGEE. Yes.

Col. PATRICK. Yes, sir; we purchased them.

Mr. MAGEE. Where are those machines now?

Col. PATRICK. Where are they now?

Mr. MAGEE. Yes?

Col. PATRICK. Why, practically all that we actually used at the front have been worn out.

Mr. MAGEE. Do you know whether or not all of them were?

Col. PATRICK. No; I can not say that every machine that went over the front was completely worn out; but the time that has elapsed since we used them there makes me believe there is not one in service now.

Mr. MAGEE. Do you know whether any one of them were shipped back to the United States?

Col. PATRICK. I do not know whether any except one or two. The machine that Rickenbacker used, for instance, was sent over here.

Mr. MAGEE. Was it used in exhibitions?

Col. PATRICK. I do not know what was done with it.

Mr. MAGEE. Do you know whether there is a pursuit plane, or a fighting plane, what Col. Gorrell suggests as a pursuit plane or a bombing plane, owned by the United States, in this country to-day?

Col. PATRICK. They are many pursuit planes owned by the United States in this country to-day.

Mr. MAGEE. Fighting planes?

Col. PATRICK. Yes, sir.

Mr. MAGEE. Where did they come from?

Col. PATRICK. From the Germans, some of them.

Mr. MAGEE. Do you mean captured?

Col. PATRICK. Yes, sir; or surrendered, rather.

Mr. FREAR. And shipped over here?

Col. PATRICK. Yes; I shipped them myself.

Mr. MAGEE. For what purpose?

Col. PATRICK. That they might be of use to our Air Service, and that they might be used for technical study, or exhibition or other use in service.

Mr. MAGEE. Or to distribute them to different localities for souvenirs of the war, I suppose?

Col. PATRICK. I know nothing about that. I tell you what I sent them over here for.

Mr. MAGEE. That is the purpose for which they were sent over?

Col. PATRICK. No, sir. We had no single-plane machines, as I brought out, and I shipped them that they might be used by the Air Service. I am also sending over a large number of Spads, which we took from the French after the armistice, and they will be over here.

Mr. MAGEE. Purchased from the French?

Col. PATRICK. They were in process of manufacture at the time hostilities ceased, and I purchased them in the settlement.

Mr. MAGEE. Have they been shipped yet?

Col. PATRICK. I saw them packed up at the shipping point.

Mr. MAGEE. How many of them?

Col. PATRICK. Between 400 and 500, when I left France.

Mr. MAGEE. You expect all of them to be shipped here?

Col. PATRICK. Yes, sir.

Mr. MAGEE. Single-seater Spads?

Col. PATRICK. Yes, sir.

Mr. MAGEE. You do not know whether they have been shipped yet or not?

Col. PATRICK. I can not tell you that. I saw them being packed up and made all arrangements for shipping them.

Mr. MAGEE. Do you know what rank the United States holds in the air service as compared with other nations?

Col. PATRICK. I do not know that I quite catch what you mean by that.

Mr. MAGEE. Well, in our naval strength we rank so-and-so. How do we rank in air service?

Col. PATRICK. Oh. When hostilities ceased we were still far behind any of our allies, and far below the enemy strength.

Mr. MAGEE. Suppose that we should need pursuit planes or bombing planes in this country, how long, in your judgment, would it take to manufacture one that would be as serviceable as the Spad?

Col. PATRICK. Probably eight or nine months from the time they settled on the type before they would produce it in quantities.

Mr. MAGEE. So that as far as the manufacture of pursuit planes or bombing planes in the United States is concerned we are to-day practically in the same position we were in when we entered the World War?

Col. PATRICK. Quite true.

Mr. MAGEE. Do you approve that policy?

Col. PATRICK. I approved of it while the war was in progress, for the reasons I have already given—that it was unwise, in my opinion, for us to have attempted at that time to build a single-seater airplane. I hope that the United States will at once select the best type, a type that has been developed, or develop one of its own, and proceed to produce them.

Mr. MAGEE. It is our imperative duty to do so, isn't it? You view it that way, do you not?

Col. PATRICK. I think so.

Mr. MAGEE. Do you know whether or not we are doing anything in the United States to develop the use of balloons?

Col. PATRICK. I have been back just 15 days, and have not ascertained what we are doing in the United States on that.

Mr. MAGEE. We are behind other countries in the development of the balloon?

Col. PATRICK. I can not answer as to conditions here. I know of the great use made of balloons by all of the armies over there.

Mr. MAGEE. I only asked this question because I am interested, as you are, in the service and in the protection of this country.

Col. PATRICK. I am very much interested.

Mr. MAGEE. It seems to me that to-day we are absolutely in an indefensible position in that we have not made it our particular business to decide upon and get in position to purchase pursuit planes and bombing planes, both of which we might need at any time, is that right?

Col. PATRICK. I understand that, so far as a bombing plane is concerned, they had one, which was already designed and in process of production when the war ceased. I do not think they have taken any steps yet to select a type of pursuit plane.

Mr. MAGEE. We have no bombing plane at all of American manufacture, as I understand?

Col. PATRICK. I understand that the Martin bomber is a very successful plane.

Mr. MAGEE. Was it tested in actual service?

Col. PATRICK. Not in actual service abroad, but in service here and in different services for planes of this type.

Mr. FREAR. But none of those were sent over?

Col. PATRICK. No, sir.

Mr. LEA. I think you stated you thought the Liberty motor had been produced in quantity; about 21,000 up to the armistice?

Col. PATRICK. That is my recollection, but I hate to go on that.

Mr. LEA. Here is a little book entitled "United States Army Aircraft Production Facts," and it claims that the production was 15,572.

Col. PATRICK. I would like to correct my own figures if that is true.

Mr. FREAR. If there are any mistakes in your figures you may correct them.

Col. PATRICK. I would like to have the right to do that.

Mr. FREAR. You may have that privilege.

Mr. LEA. And I would like to have him give the production record in the United States for all engines.

Mr. FREAR. He may do that. I take it he has no independent knowledge on that score. The committee will now adjourn until to-morrow at 2 o'clock.

(Thereupon, at 4.45 o'clock p. m., the committee adjourned until to-morrow, Tuesday, August 5, 1919, at 2 o'clock p. m.)

SUBCOMMITTEE No. 1 (AVIATION) OF THE
SELECT COMMITTEE ON EXPENDITURES IN THE
WAR DEPARTMENT, HOUSE OF REPRESENTATIVES,
Tuesday, August 5, 1919.

The committee met at 2 o'clock p. m., pursuant to adjournment on yesterday, Hon. Walter W. Magee, presiding; also present Hon. Clarence F. Lea.

Mr. MAGEE. I wish to state that Mr. Frear, the chairman of the subcommittee, has been unexpectedly called away to attend a funeral this afternoon, and he has requested us to proceed in his absence. So I will go on with the investigation, with the assistance of Representative Lea.

I will ask Dr. Christmas to give his full name to the reporter for the purpose of the record.

TESTIMONY OF DR. WILLIAM WHITING CHRISTMAS, PRESIDENT OF THE CANTILEVER AERO CO., 1265 BROADWAY, NEW YORK.

(The witness was duly sworn by Mr. Magee.)

Mr. MAGEE. Dr. Christmas, where do you reside?

Dr. CHRISTMAS. I am residing at the present time in New York City.

Mr. MAGEE. How long have you resided there?

Dr. CHRISTMAS. About three years.

Mr. MAGEE. May I ask your present age?

Dr. CHRISTMAS. Fifty-two.

Mr. MAGEE. Where did you reside prior to that time?

Dr. CHRISTMAS. In Washington City.

Mr. MAGEE. How long did you reside here?

Dr. CHRISTMAS. About 30 years.

Mr. MAGEE. And where prior to that time?

Dr. CHRISTMAS. In North Carolina.

Mr. MAGEE. Is that your native State?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. Where were you educated?

Dr. CHRISTMAS. I was educated in the public schools of Washington, and at the University of Virginia and George Washington University.

Mr. MAGEE. You graduated from the University of Virginia?

Dr. CHRISTMAS. Yes.

Mr. MAGEE. In what class?

Dr. CHRISTMAS. In the class of 1885, I think.

Mr. MAGEE. What is your present occupation in the city of New York?

Dr. CHRISTMAS. I am president of the Cantilever Aero Co.

Mr. MAGEE. Is that a corporation?

Dr. CHRISTMAS. Yes, sir; that is a corporation.

Mr. MAGEE. When was it created?

Dr. CHRISTMAS. When?

Mr. MAGEE. Yes; when was it organized?

Dr. CHRISTMAS. About a year ago. My profession is that of scientist pure and simple.

Mr. MAGEE. Have you spent a great deal of time studying the subject of aerodynamics?

Dr. CHRISTMAS. As far as I know, that is, as far as I can get information, I have studied this subject longer than any other man living. I have been studying it for about 27 years. The ramifications of my studies have taken into consideration the study of other scientific subjects which have intimate or remote relationship to the study of aerodynamics; and that includes naval architecture, electricity, physics, chemistry, meteorology, mechanical, civil, and electrical engineering, and aeronautical engineering, of course.

Mr. MAGEE. Have you made any special study of bird flight?

Dr. CHRISTMAS. When I first began the study of aerodynamics I began with kite exhibitions, making these kites myself, without regard to suggestions from the outside. I found that the kite was a very primitive invention as regards sustaining itself in the air, and I did not pursue those studies very long, because I found that they led me in the wrong direction. I therefore took up the study distinctly of bird flight for the natural sustentation of heavier-than-man objects.

Mr. MAGEE. Do you believe that in the study of bird flight will be found a solution of the problems of airplane flight?

Dr. CHRISTMAS. There is no other solution to it whatsoever. I would like to say that the airplane which is universally used to-day I discarded over 12 years ago as an inefficient and inoperable contrivance. It is a costly apparatus; does not bring results, and can not be made to do so. That is, this type of airplane is what you would term a stiff-wing design flying apparatus. It has no mechanical simulation in nature whatsoever. It is the result more of follow the leader than any independent investigation of aerodynamics.

The Wrights, under the leadership of Prof. Langley, Octave Chanute, and Prof. Montgomery, developed a heavier-than-air apparatus which had, and it has been followed, a stiff-wing contrivance.

The chief objection to the stiff-wing design more particularly is that in taking air currents a great deal of dynamic efficiency is required to bring about successful attack. That means loss of economy. While this attack is being made by this mechanical influence, which we will call a motor, certain reverse or inhibitant air currents are produced by this stiff mechanical contrivance being forced into the air. The result is we have what we call high parasitic resistance, or resistance to the passage of the apparatus through the air.

Mr. MAGEE. You have produced practical airplanes?

Dr. CHRISTMAS. I have been building and flying airplanes for about 11 years.

Mr. MAGEE. Go on and designate or describe what kind of airplanes you have been using?

Dr. CHRISTMAS. My investigations and studies have covered the whole field. That is to say, monoplanes, biplanes, and tandem monoplanes and tandem biplanes, planes without struts or bridge wires, and planes with one or more struts or bridge wires. It has covered

Mr. MAGEE. Do you think the Hall-Scott motor a better motor and more efficient?

Dr. CHRISTMAS. Oh, yes, sir.

Mr. MAGEE. There have been a great many instances of accidents, especially training accidents, to our boys in learning to fly, as well as in flying. What do you attribute those accidents to?

Dr. CHRISTMAS. That is a very important question, and it involves quite a considerable explanation. If I had a blackboard I could make yourself and the committee thoroughly appreciate these explanations. In the first place, we know that the design itself is so faulty that the machine in sustaining itself in the air is poised on a point, which is called the center of effort—

Mr. MAGEE (interposing). Now, are you describing any particular machine?

Dr. CHRISTMAS. I am describing the machine which the Government has had in universal use, and it is of only one type—

Mr. MAGEE (interposing). How do you designate that machine?

Dr. CHRISTMAS. That is what is called a parallel truss machine; whether it is the De Haviland 4, the De Haviland 9, the Curtiss JN-4, the Oriole or the Blue Bird—every one is precisely alike, except that it is painted differently. The principle is precisely the same, and the photographs would clearly show that.

Now, as to this wing design, which is a stiff-wing design, the design itself is so faulty that the center of effort, as I call it, or the center of pressure as some call it, has a strong disposition to travel backward and forward. So when the wing is poised on the center of effort or center of pressure, if it happens to go down tail end, this way [indicating on photograph] that point has a tendency to slide up toward its nose. After it has gone for a certain distance the machine gets so tail heavy that it is impossible for this mechanical couple to be used to bring it back to its level keel, as a rule, and the man operating it must either let the machine go altogether and right the machine afterwards or be killed. If the machine goes over to any appreciable degree that center of effort has a tendency to fly toward the tail, and the result is it gets heavier and heavier toward the nose, and finally the operator can do nothing with it and he is killed: he can not bring it out of the nose dive at all.

The reason for that is this: There is an upper and a lower curve in a wing. These designers have a habit of putting these points in the curve, the under curve and the upper curve on almost perpendicular lines. The result is that the machine reacts on this very narrow point. If there is a difference in that center of pressure or of effort, on the top curve or underneath, and we will say that the one underneath is out here and the other above is much forward [indicating on photograph of airplane], then the machine is sitting on a comparatively long base, and under those conditions it will right itself, and yet that has nothing to do with maneuverability.

It is just a well-known principle in bird flight. A man who has studied the subject thoroughly could find out very quickly how a bird can successfully sustain itself automatically in the air. That is one of the reasons—and there are several more reasons—why the bird can sustain itself in the air; and all those factors, of maneuverability and safety, should be inculcated in the design of any airplane.

Nature has had a very great advance start of us in the development of flying apparatus, and we can attribute it to nothing but ignorance if man attempts to go aside from bird flight in airplane designing, because, gentlemen of the committee, it simply can not be done. I have been through it, and it has caused me to spend a great deal of time, and has cost me a great deal of money, and I think I understand the situation.

Mr. MAGEE. Does your company produce a bombing plane?

Dr. CHRISTMAS. We are the only company in the world that can produce any kind of plane, whether it is a strutless plane or a flexible-wing plane, or any type of plane whatsoever. Other companies must confine themselves, on account of patents which I hold, to this parallel-truss type of machine.

Mr. MAGEE. Does your company produce a pursuit plane?

Dr. CHRISTMAS. We have produced a plane which is easily 60 miles an hour faster than any other machine in the world. But owing to the prejudice—

Mr. MAGEE (interposing). You have produced such a plane?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. A pursuit plane?

Dr. CHRISTMAS. Yes, sir; that is what is called a pursuit or fighting or scout plane.

Mr. MAGEE. Now, the testimony here shows that there was not a pursuit plane or a fighting plane produced in this country and sent overseas during the World War. How long would it take your company to produce a pursuit plane suitable for service at the front?

Dr. CHRISTMAS. We could do it in six weeks with the force that we have. And that force has been diminished I might say.

Mr. MAGEE. Did you ever have any conversations or take up this matter with the War Department in reference to efficiency in the Aircraft Service either prior or during the war?

Dr. CHRISTMAS. I have seen all the heads of departments which have to do with the War Department and the Air Service, and I regret very much to say that a more demoralized body of men I have never witnessed in my life, from the Secretary of War down to the most minor hireling in the service that same inefficiency is most pronounced.

Mr. MAGEE. Well, I do not care to bring any personalities into this investigation, but your view, I take it, is that we have not made progress in the Air Service during this war, the progress that this country ought to have made; is that right?

Dr. CHRISTMAS. That is absolutely true; the results have shown that.

Mr. MAGEE. If you can give any information which will be valuable to the Government, discarding any personalities, as to what you attribute the inefficiency or postponement of results to, I will be glad to have them.

Dr. CHRISTMAS. I attribute the failure of the Air Service in the last war to want of comprehension of the seriousness of what was before our country. This want of comprehension was due to insufficient information, which, of course, in turn spelled inefficiency. Inefficiency and ignorance were so pronounced that they would not listen to advice—to good advice; and I began to see after awhile

that they were quite conscious of the ignorance and really believed that it was necessary for their self-protection to keep out well-informed men.

Mr. MAGEE. Rather than what?

Dr. CHRISTMAS. To keep out well-informed men.

Mr. MAGEE. Well, now, in order to get a proper development in the Air Service what kind of men do you think should be at the head of that service; I mean by that, men with what kind of training?

Dr. CHRISTMAS. The men to be at the head of the service should be so trained in some aerodynamic formulae and research that it would protect them from ignorant advice and ignorant procedure. It is a dead certainty and unquestionably true that the present type of airplanes can not be used as a base to improve upon; it has no reason for being; it is practically without the natural tendencies of a study of bird flight. A study of bird flight will undoubtedly settle for all time the airplane capacity to sustain itself in the air and carry loads, but unless these researches are carried along the line of natural sustentation as exhibited by the bird our Air Service will remain for 1,000 years where it is now.

Mr. Chairman, I have talked this matter over with men from the other side. Maj. Smart, of the Royal Flying Service, Great Britain, told me in our own factory that the English Government was satisfied that no improvements could be made, no further development on the present type of plane.

Mr. MAGEE. Is it your opinion that the men at the head of the Air Service in this country should be men having full knowledge of aerodynamics?

Dr. CHRISTMAS. He should have at least a working knowledge and a practical knowledge, combined with some scientific information, and also have sufficient executive ability to coordinate the forces. He should have sufficient knowledge of practical factory methods to be able to be of such service in his consultations as to point out discrepancies and inaccuracies in factory production.

Mr. MAGEE. He ought to be a man who is familiar with the subject?

Dr. CHRISTMAS. He certainly should be—and the office should be entirely devoid of politics.

Mr. MAGEE. Now, the pursuit plane which your company manufactures, is that easily destroyed or shot to pieces?

Dr. CHRISTMAS. No, sir; it is the most difficult of them all to be destroyed. In the first place, as exhibited here in these photographs, that plane has no struts or wires. For that reason struts or wires can not be shot to pieces. In the machines which have struts or wires, if the struts or wires are shot to pieces the machine collapses because its mechanical integrity depends entirely upon those struts or parts. Another thing, the parallel truss machine is composed practically of wood, almost entirely, and these high-velocity bullets have a shattering effect on the wooden members. The spars, which have to do with the strength of the wings of our type of machine, are of a composite build, of the highest grade tensile steel in combination with laminated wood.

Mr. MAGEE. Did you inform the War Department of your ability to produce a pursuit plane?

Dr. CHRISTMAS. I not only informed the War Department of that, but went into a conference with Secretary Baker—

Mr. **MAGEE** (interposing). When was this conference that you are telling us about?

Dr. **CHRISTMAS**. Before the war. I had a conference with Secretary Baker and told him I believed this country was going into the war with Germany; that the natural trend of events very commonly showed that we should be ready for eventualities. Mr. Baker did not believe any such thing, to begin with, and he said, "Doctor, I do not know anything about airplanes." In answer to that I said, "That is the very reason why I came to see you, because I thought possibly you might be unprejudiced and might be made to see by intelligent observation and thorough appreciation of the subject what ought to be done."

Mr. **MAGEE**. Well, did you submit any planes to the War Department, any plans of your airplanes?

Dr. **CHRISTMAS**. Yes, sir. I submitted plans to a Col. Mitchell. I think he was. I know Gen. Squier very well. I went to see Gen. Squier and showed him my drawings, and begged him—I said, "You do not want necessarily to take what I tell you, but for God's sake get together enough men of sufficient mental capacity to go into this subject deep enough to save this country, because as sure as you live. General, we are going to be in such a situation in regard to airplane development that we will be in a most embarrassing position."

I had the choice of cooling my heels in his outside office or letting a most important matter to the Government drop as far as I was concerned. I kept after him as long as my dignity would allow it, and then I had the gratefulness to retire.

They sent me from there to the Munsey Building, which seemed a shell of the most complete disorganization that I ever came in contact with. And they, in turn, from what I interpreted to be orders from higher up, passed the buck, as it were, from one to another. I just played that little game of ring around rosy until the situation became unbearable to me, and then I gracefully withdrew.

Mr. **MAGEE**. Well, as I understand, you did not get the consideration which you thought you ought to have had, and you got no results?

Dr. **CHRISTMAS**. None at all. I got neither consideration nor results.

Mr. **MAGEE**. Will you leave those photographs with the committee?

Dr. **CHRISTMAS**. I will be very glad to do so.

(The photographs offered by the witness, nine in number, marked on the back, "Christmas Bullet. Flexible Wing, Strutless Biplane. Speed 200 M. P. H. Take off and lands at approximately 55 M. P. H. 200 H. P. 6 cylinder motor. The only machine in the world built on the principle of true bird flight. Invented and designed by Dr. Wm. W. Christmas. Built by Cantilever Aero Company, 1269 Broadway, New York, N. Y., U. S. A."; and, in addition, photographs 5, 6, 7, and 8 also contain on the back the following: "Christmas Bullet, Strutless Biplane. Official Government Photographs taken at Mineola, L. I., Field No. 1, December 7, 1918," and they were marked, for the purpose of identification, "Exhibit Dr. Christmas No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 7, No. 8, and No. 9.")

Mr. **LEA**. I would also like to have this copy of the "Aerial Age" put in?

Dr. **CHRISTMAS**. All right.

(Thereupon, the copy of the weekly publication entitled "Aerial Age" of date January 20, 1919, was identified as a part of the record by being marked "Exhibit Dr. Christmas No. 10".)

Mr. MAGEE. What are those photographs?

Dr. CHRISTMAS. These are photographs of the Christmas Bullet in operation, and some of them are Government official photographs as marked on the back, taken at Mineola (Long Island) Field, December 7, 1918.

I would like to explain that these photographs were taken under the greatest of difficulties, because we were surrounded by the most pronounced, and deliberately pronounced, hostility. To illustrate what I am saying here, we made application to bring that machine to the field at Mineola, and it was done after a great deal of trouble. Gen. Kenly, who was at the head of the service at that time, and a man that I really think did what he could to further the art, was under the surveillance and direct orders from men higher up, and he had to do many disagreeable things, among which was that we were finally told most emphatically that that airplane could not be flown from a Government field.

Mr. MAGEE. Who told you that?

Dr. CHRISTMAS. Col. Harman, who was in charge of the field, told me so; and Lieut. Breese told me so, and—

Mr. MAGEE (interposing). What field was this?

Dr. CHRISTMAS. Field No. 1, Hazlehurst.

Mr. MAGEE. That is at Mineola, Long Island?

Dr. CHRISTMAS. Yes, sir. We protested against such ill treatment, saying that our only object in the world was to help the Government in its desperate situation to develop an airplane worth while, one that would be sufficient to contend against the German forces. But it did no good whatsoever; we were finally ordered to take the machine out of the field.

Mr. MAGEE. Who took these photographs?

Dr. CHRISTMAS. These photographs [indicating those marked "Exhibit Dr. Christmas No. 5, No. 6, No. 7, and No. 8"] were taken by an official Government photographer.

Mr. MAGEE. All of them?

Dr. CHRISTMAS. These others are some taken by a private photographer. [Indicating photographs marked "Exhibit Dr. Christmas No. 2, No. 3, No. 4, No. 9, and No. 1."]

Mr. LEA. And these others were taken by a Government photographer?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. These photographs which I hold in my hand, taken of a machine in the air, were taken by a Government photographer?

Dr. CHRISTMAS. Yes, sir; by Lieut. Muller, or under his direction.

Mr. MAGEE. At Mineola?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. At Hazlehurst Field?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. When were they taken?

Dr. CHRISTMAS. It is shown on the back, and I think that is correct, December 7, 1918. If you will notice one of these photographs shows a storm developing, on the way. It is the one that has been identified by being marked "Exhibit Dr. Christmas No. 5."

While this machine was operating with three or four machines, the others came down as this storm began to develop in intensity, and this machine, the "Christmas Bullet," was the last machine which was doing any exhibition flying. At the time that this machine was in flight and just before it came to the ground, and a few minutes before it came to the ground, the storm had pretty well developed into a very heavy gale, and Col. Harman and the other officers, in looking at the plane, remarked at its extraordinary steadiness, while these other machines were being roughly handled by the wind. This is known as the "Christmas Bullet."

Mr. MAGEE. Is that what the flying machine that you produced is called, or is that only one type of the machine?

Dr. CHRISTMAS. That is only one type that we have got.

Mr. MAGEE. What other types of flying machines does your company produce?

Dr. CHRISTMAS. Of course these machines are named by their makers different names, but the principle involved in all my machines is precisely the same. That is to say, as close mechanical simulation of true bird flight as it is possible to give it.

Mr. MAGEE. You call this the "Christmas Bullet"?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. Have you any other designated names of machines produced at your plant?

Dr. CHRISTMAS. Yes, sir; we have machines called the "Streak," and "The Hawk," and "The Eagle." We have these under design and in production.

Mr. MAGEE. Have you the negatives of those pictures of machines taken in the air?

Dr. CHRISTMAS. These negatives were taken by the Government, and when we asked for copies of these photographs we were refused permission to get them.

Mr. MAGEE. By the Government?

Dr. CHRISTMAS. Yes, sir; by its representative, who said to us that he did not know whether the negatives could be found, or where they were. It looked to me like something else, but he said he thought they had been destroyed or misplaced or something had happened to them and he could not locate them. But judging by subsequent events, as well as those that passed before, it was deliberately done because this machine had out-performed any other machine on the Government fields.

Mr. MAGEE. Did the photographs show that?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. Was that apparent to anyone who was expert in flying?

Dr. CHRISTMAS. It certainly was.

Mr. MAGEE. The only response you got was that they could not find the negatives; is that right?

Dr. CHRISTMAS. Yes, sir; and the only reason that these photographs are in existence to-day is because Lieut. Muller is personally known to me and gave me one set of these photographs, which belonged to him.

Mr. MAGEE. Is this the only set you have?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. Are you willing to put them in evidence here?

Dr. CHRISTMAS. Oh, yes. We have had these reproduced from the copies he furnished me, which I have.

Mr. MAGEE. Go on and tell the committee just what practical results you obtained there. What I mean is, show what you have produced, and that you have produced efficient machines if that is the case, and that you were in a position to produce, as you claim, machines vastly superior to any produced by the Government during the period of the war; and that in addition to that you could have produced an efficient pursuit plane, and an efficient bombing plane if you had been requested to do so by the Government?

Dr. CHRISTMAS. Well, that is a very pertinent question, Mr. Chairman. It has been the intention of all the designers of airplanes to cut down what is called the parasitic resistance; that is, the resistance to its passage through the air, to such degree that high speed could be obtained. They used all sorts of methods, but the resultant structure was so cluttered up with struts and bridge wires that it simply could not be forced through the air above a certain speed by a certain horsepower; and that mechanical agency had to be excessive. Therefore its economy was very poor; and put such horsepower as you would in these machines you still were way below the possibilities.

I called the attention of the Government officials to that fact time and time again. I told them that they could easily enough see this by diagrammatically expressing it in what we call efficiency or resistance curve and horsepower curve. The horsepower curve and the resistance curve would cross each other after a certain point had been reached, and at that point it would be useless to put any more power in it. The thing to do was to see how much resistance could be eliminated.

I have known these facts for years, and tried to bring them to the attention of the department. I tried to show them in a practical and demonstrable way, by a machine actually performing in the air, how necessary that was. Therefore I used a machine with only 200 horsepower; in fact, in the first machine I only used 185 horsepower. This machine had such extraordinary speed over the De Haviland machine that Lieut. Munford, who was later killed, said that he thought his machine had stopped flying when our machine passed him, which was easily 60 miles an hour faster than the De Haviland machine, and at a very, very low horsepower.

Mr. MAGEE. You showed the representatives of the Government this fact by a real test in the air?

Dr. CHRISTMAS. Absolutely; and there are photographs taken by the Government photographer.

Mr. MAGEE. In this connection I would like to have you tell the committee whether you took such action as you did take with the idea of personal profit out of the matter. In other words, whether it was a matter of compensatory gain with you, or whether it was from your patriotic purpose and without any object of personal gain to yourself?

Dr. CHRISTMAS. I went to Mr. Baker, who I know very well, and have known him 22 years. I said, "Baker, I haven't any axe to grind in this matter whatsoever, in proof of which I will tell you a little story." That is what I told him. And I said to him, "I am perfectly willing to give my patents over to the United States Govern-

ment, to use them as it sees fit, with my advice and my service, without compensation of any kind, leaving that entirely to the War Department later on." My sole object was an unselfish one, knowing the chaotic condition in which the air service was in this country.

But I not only did not get any response of the character such as I might have expected for the service I offered, but I was looked on with actual suspicion. Now, gentlemen of the committee, Germany could have gotten my services if I had been unpatriotic. She wished my services; offered me a most stupendous monetary consideration to go there and take over her air service development. But I did not do so. The result was, a monetary loss to an extraordinary degree to myself; and the further result of all of it was that I not only did not get any recognition whatsoever from my own Government, that I had so patriotically thought of, but I was looked upon as a man who was incapable of doing anything, or that I had something that was so negligible that it could not be used.

Notwithstanding all this I studiously persisted in trying to relieve my Government of its evident embarrassment, but could do nothing whatsoever.

From my point of view it is my positive belief that certain interests had deliberately set out to mulct this Government of a billion and a half of dollars without the slightest possible return, if they could help it. I have not any tangible means of proving any such thing; I wish I had.

Mr. MAGEE. I suppose what you mean, is that the moneys appropriated by the Congress have not produced any such results as were anticipated and hoped for?

Dr. CHRISTMAS. Exactly; they never intended to build any air-planes.

Mr. MAGEE. Well, they built some DH-4 planes, as the testimony shows. What have you to say as to the condition of the air service in this country now, at this time, from the work that has been done?

Dr. CHRISTMAS. The air service in this country is completely demoralized. It is in such chaotic condition that there isn't a man who has any degree of authority who can do anything with it. Those who have a sincere desire—and I believe there are some—to ameliorate this condition, can not do so, because their hands are tied. The service is full of incompetent men; men who have had education in aerodynamics for a very few months to a year and a half, or possibly a little longer than that—and any study as abstruse as this is such a study as it is impossible to acquire a knowledge of in that time. Those men have this aviation business under control, and they are using a type of machine which has been obsolete for 10 years, which it is not possible to excuse, and it is not a thing that can be used as a base to improve upon.

Mr. MAGEE. What do you mean by that? That it is a type of machine that has been obsolete for 10 years, as I understood you to say?

Dr. CHRISTMAS. This type of machine that we are using to-day is a parallel truss type of machine, and which any civil engineer in the world will condemn without a moment's hesitation.

Mr. MAGEE. The DH-4.

Dr. CHRISTMAS. Yes, sir; that is a parallel truss machine. These machines have been developed up to their full efficiency; they can not be developed further. Any appropriation made by the Congress

which will have to do with the manufacture or assembling of a parallel truss machine is nothing in the world but money squandered or thrown away. No results whatever can come from money so expended.

In my investigations I was absolutely unprejudiced. I found, as I said, years ago that the stiff-wing parallel truss machine was inoperable, inefficient, and it could not by any possible chance be improved upon. I mean that it can go no further, and that you can not improve it up to the point of efficiency that you could call it really a flying apparatus. Therefore, I abandoned that type altogether and took up the designing and building of machines along the line of true bird flight, and have met with more success than I ever anticipated, or perhaps dreamed of.

Mr. MAGEE. Are you to-day and have you been manufacturing and selling machines?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. And supplying the market?

Dr. CHRISTMAS. Yes, sir. In connection with that I want to say this: My appearance before this committee has absolutely no financial bearing whatsoever. This company that I represent is so swamped with orders that it could not possibly build them—orders for civilian use and in Europe—that it could not possibly fill any Government order for at least a year, even with a large force. The French high commission is intensely interested in our planes, and in the spring we shall certainly go to France and England. Mr. Thomas Sopwith, who has been the builder for the English Government of fast types of planes, is not only intensely interested in our proposition, but one of our representatives has gone to France and to England for the purpose of establishing agencies over there for our product. So under any circumstances I could not be charged with having any monetary interest in appearing before this investigating committee.

Mr. MAGEE. You said the French high commission is interested in your plane. What do you mean by that?

Dr. CHRISTMAS. The chief representative here of the French Government is Pierre Bosc, of the French commission. They came to our offices there in New York, and were not only intensely interested in our proposition but were very enthusiastic over it. Two or three French aces who saw our product in the aeronautical show in New York were particularly struck with the design; in fact, they told me that the French Government was working along these lines itself but had not carried it to the degree of excellence that I showed in the types of machines then on exhibition. That is, to show that a bird's wings, to begin with, is flexible, and that is the reason it is never broken and can not be broken by any kind of flying.

A bird, regardless of weather conditions, does not suffer from what is known as wind shock. The parallel truss type of machine of the stiff wing variety suffers constantly from wind shock on that account, and is in constant danger of being destroyed if a wind is strong and the wind pressures are high enough. A bird's wing is flexible in three distinct directions: That is, it flexes vertically, up and down; it flexes fore and aft, in the line of flight; and it flexes diagonally, the outer tip of the wing lifting up, which allows the wind gusts to do what we term washout. It allows these gusts of wind to wash

Dr. CHRISTMAS. It was held from the 1st to the 15th of March of this year.

Evidently something happened after Gen. Menoher got to Washington, because silence was the procedure after that. In answer to this letter, which I personally directed to Gen. Menoher, whom I knew, I got a letter from a man named Col. M. F. Davis, a man who himself admitted knew nothing whatsoever about airplanes or aerodynamics. And he writes:

AIR SERVICE,
Washington, D. C., March 29, 1919.

Dr. WM. W. CHRISTMAS,
Cantilever Aero Co., 1265 Broadway, New York.

DEAR SIR: Gen. Menoher directs me to answer your letter of March 28—

I do not believe Gen. Menoher ever saw the letter—

concerning the subject of flying your airplane, "The Christmas Bullet," at Lufberry Field. We are carrying on no further activities at Lufberry Field and have directed our Supply Section to cancel the lease thereon.

Which was not true.

All property has been shipped away and there will be no accommodations at the field.

As you have heretofore been informed, the policy of the Air Service is not to grant authority for experimentation on Army fields by new designs and experimental ships until the same have been sand-tested and given experimental trial by our Engineer Section at its experimental station, McCook Field, Dayton, Ohio.

Very truly, yours,

M. F. DAVIS,
Colonel, Air Service (Aeronautics), Executive.

If you will refer to the Hughes investigation you will find the statement made by witnesses that it was the deliberate intention of those officers at that field to get machines of different character from what they were using to that experimental station, and find out the financial ability of the man or company to keep those experiments up and deliberately destroy his machine and keep him out of the field. We positively refused to send our machine to McCook Field to be sand tested.

Mr. MAGEE. As you looked at it it was to be sandbagged?

Dr. CHRISTMAS. Precisely; just like others had been. And some men had been deliberately ruined, according to some of the testimony given before the Hughes Committee.

Mr. MAGEE. I want to know what you did, if anything, towards getting an investigation of your ability to produce an efficient machine during the time since our entry into the world's war, April 6, 1917?

Dr. CHRISTMAS. Mr. Chairman, I started with all the patriotic intention and war enthusiasm possible, first to the Secretary of War, then to Gen. Squier, Col. Mitchell, Col. Clark, Col. Bane of McCook Field; all the way down the line, trying to get those men interested in a type of machine which would give our boys some reasons for doing any fighting over the battle front. They would not allow me to explain the situation. They showed me the greatest discourtesy, and I can say that their deportment was anything but dignified.

Mr. MAGEE. Did they offer any response to your request to investigate your machine?

Dr. CHRISTMAS. They would do nothing of the sort. They would do nothing.

Mr. MAGEE. Or test it?

Dr. CHRISTMAS. They would not do anything. The only thing in the world they wanted to do with our apparatus was to have us bring it to Dayton, Ohio, and let them break it up.

Mr. MAGEE. What do you mean by "and break it up?"

Dr. CHRISTMAS. I mean precisely what I say. They were going to pile it with weight and sand until the whole structure gave way and then tell us the machine wouldn't do; like they had done others.

Mr. MAGEE. They had considerable trouble at the Dayton experimental laboratories.

Dr. CHRISTMAS. Oh, they have had nothing but trouble all the time. The condition there is absolutely chaotic.

Mr. MAGEE. Who was responsible for the conditions up there?

Dr. CHRISTMAS. Of course, I lay the responsibility on the last man, the man who is last higher up. I think the responsibility should be laid upon Secretary Baker's shoulders entirely because——

Mr. MAGEE (interposing). What was the trouble at Dayton, do you know?

Dr. CHRISTMAS. The trouble at Dayton as we found it was this: There was a certain type of machine that they were going to use regardless of the blood they spilled in France or in this country, and they intended to use it regardless of any kind of advancement anywhere else, whether mechanical or physical.

Mr. MAGEE. What kind of machine was it?

Dr. CHRISTMAS. The parallel truss machine which was exhibited by the Thomas-Moores, Dayton-Wright, and the Curtiss Co.

Mr. MAGEE. What name did the machine bear?

Dr. CHRISTMAS. The machines which the Army used mostly were the De Haviland 4's; and they had a few De Haviland 9's, which were not developed until later; and they had the Curtiss JN-4, and 6's, I think; and the Curtiss people, in a desperate effort to get out fast planes, brought the design of a Bristol fighting scout to Buffalo and put a Liberty 12 engine in it, 400 horsepower or more, and tried by sheer mechanical force to fly it at a high rate of speed. But they failed miserably on that.

Mr. MAGEE. Was it your observation, and is it your judgment, as far as the Government is concerned, that all roads led to McCook Field, at Dayton, Ohio?

Dr. CHRISTMAS. Absolutely so; and that was looked after by a certain coterie of Army officers, who formed a ring around that field that could not be broken through, and they resented any interference of any character, whether it was of the observation kind, or suggestive, or anything else.

Mr. MAGEE. Is it your judgment, based upon your experience and observation, that anyone not within this coterie or ring would get little encouragement or recognition from the Government?

Dr. CHRISTMAS. Yes, sir; we were very much discouraged from the literature we got from McCook Field. They gave us a Liberty 6 engine, with the proviso——

Mr. MAGEE (interposing). Who gave you that?

Dr. CHRISTMAS. Out there at the McCook Field, under the direction of Col. Bane. That engine was given to us under the strict proviso that the machine would not be flown, but that it would be

brought to McCook Field to be tested. They intended, as we found out, to break the machine to pieces.

If it would not be out of place, I can read you a letter that I wrote to Secretary Baker, which I think will very clearly explain my position as a patriotic citizen.

Mr. MAGEE. What is the date of this communication?

Dr. CHRISTMAS. I have forgotten the date of it. I think it was about the 1st of December, 1917.

Mr. MAGEE. All right.

Dr. CHRISTMAS. This letter is as follows:

Hon. NEWTON D. BAKER,

Secretary of War, Washington, D. C.

MY DEAR SECRETARY: It is safe to say in all your life's history you have never received a more serious, sincere, and momentous communication than this. Just at this time the President and yourself want strong and virile friends, who will by their devotion, protect instead of obstruct. I do not believe any man can sympathize with you more than myself, because if there is in this country a man of whom more lies of unlimited number have been spread broadcast about him than myself, I would like to know that man.

I was referring there to the various outrageous things that were said about me around the Government offices.

I was fully aware of the outrageous fabrications that were brought to you about me but what could I do about it? I did not want to probably embarrass you, but yet I was dead certain that the wreck was coming.

Referring to this chaotic condition in the Air Service.

There are certain interests who are afraid of my knowledge and extensive information on aerodynamics to such an extent that they would not stop at anything to prevent the President or yourself from obtaining it.

My sole object in writing to you is to help the President and yourself. I am saying this in all sincerity and loyalty. I really feel deeply sorry for the President, because he is not in a position to help himself. There are men who have from the looks of things betrayed both of you, and at a time when the country is passing through the most critical period of its history.

If I can do anything to help you, and I know that I can, call upon me, and my services will be at your disposal. This dreadful thing is rapidly getting out of hand, and the entire country is aflame. A little later may be too late. Won't you let me help you? I can not say more.

I am only calling attention to that letter because I wish to emphasize the fact that I was entirely devoid of any mercenary motive whatsoever in regard to furthering the interests of the Air Service in this country.

Mr. MAGEE. I will tell you what the testimony, as I view it, has shown: There was appointed what is called the "Bowling Commission," and that commission went over to Europe in the summer of 1917—I think some time in June or early July—for the purpose of comparing with the representatives of our allies' aircraft service, and it has been testified that that commission entered into an understanding with our allies that the United States should produce and send overseas only an observation plane, and that our allies insisted that the United States should not manufacture and send over for overseas service a pursuit plane or bombing plane. In other words, when the then pitiful condition of this country as to its aircraft service is presented to the representatives of the aircraft service in the United States they simply admit that the country did not produce pursuit planes—that it did not produce bombing planes. And so that on the particular request of our allies that course was pursued.

So that is the excuse and explanation which is given for the condition the country finds itself in to-day.

I make that statement in order that you may see what position the representatives of the aircraft service appear in.

Now, I want to ask you, Doctor, whether you took up with the War Department the question of the manufacture of a bombing plane, and whether your company was in position to produce bombing machines for overseas service?

Dr. CHRISTMAS. Here is some information as to Gen. George O. Squier, April 7, 1918, about bombing planes, giving the full explanation of it all, in which I call attention to Class B and Class C, and I had also Class A, which I have not got here.

Class C represented a bombing plane with a span of 100 feet across the wings, with an area of 2,000 square feet, and 1,200 horsepower. That machine had a capacity for speed of 107 miles an hour, and it carried gas and oil from 4 to 6 hours, which was in excess of that required. It had a complement of 4 men, 3 machine guns, and 1 rapid-fire gun, and was controlled by 2 aviators. This machine had 6 controls to keep its integrity on a par—that is to say, 4 manual and 2 automatic—and it was armored around vulnerable parts. The price of that machine to the War Department was \$80,000.

Class B had a span of 120 feet. The area of this plane was 3,000 square feet, and the horsepower 1,800; the speed of this machine was 105 miles an hour, with a gas and oil complement of 4 to 6 hours. This machine had 4 machine guns and 2 rapid-fire guns. Its armament and equipment were practically the same as Class C, except the armament and equipment was heavier. The price of that machine as given to the Government was \$120,000.

England, France, and Italy were begging their engineers to get out bombing machines, because they would be the determining factor in this war. They knew that these large bombing machines could stop this war, and they were using every means in their power through their engineering force to develop these bombing planes, and they were accomplishing results; but we were absolutely doing nothing.

The type of machine which I last called the attention of the War Department to was what I call class A. This machine is of 30 tons capacity, including its own weight. It has four engines of 1,000 horsepower each, or 4,000 horsepower altogether, with a speed of 115 miles. It has 26 guns on it; 22 machine guns and 4 two-pound rapid-fire guns, with a crew of 28 men. This plane was a true battle plane in every sense of the term. It was so situated in its complement of guns that there was not a blind zone on the machine whatsoever. Its gun platform as technically understood—by this is meant that the machine is so stable and so large that the gunner can take deliberate aim and accomplish results such as he could not get in a smaller type of machine.

These small scout machines or other machines attacking this battle plane would have no possible chance with it, because this type of plane could outrange every other type known, and it is yet much in advance of any that Italy has produced, or England, although Italy and England are fast approaching this size. Their last edition is a Handley-Paige of 126 feet spread.

Mr. MAGEE. What tonnage capacity is that machine?

Dr. CHRISTMAS. That is about 12 tons, I should say.

Mr. MAGEE. How large a crew?

Dr. CHRISTMAS. That has a crew of about 5, I think. The advantage that I called the War Department's attention to was a high-class battle bombing plane was, on account of its outranging other planes it could at its leisure shoot other planes to pieces before they could get in range. Besides, the gun emplacement and equipment herein described—this plane had a compartment or nest of 40 bombs weighing 200 pounds each, which could be released at once, or singly. All the control mechanism of this plane is made electrically operated and also manually operated. Every precaution possible has been taken to guard against possible accident under shell fire and under attack of any description.

Mr. MAGEE. Do you think the production of that kind of a plane is feasible?

Dr. CHRISTMAS. That machine can be put in production so easily that after the first one has been built, that is to say, the forms and templates have been made, that they can be very rapidly turned out.

Mr. MAGEE. What leads you to that conclusion?

Dr. CHRISTMAS. Because the engineering principles involved in this machine are well known to all engineers. There is not any happy-go-lucky mechanical devices there. The parts are macroscopic in character; the driving mechanism is well known in automobile practice. The body of fuselage is made round for the purpose of strength and invulnerability of attack, and the parts of the gun emplacements are so situated that no blind zones are discernible in the machine at all. There is no point of the compass but what at least four guns can be brought to bear on the enemy.

Another thing to which Mr. McCorry has just called my attention is very, very important: The type of bombing plane which the Allies have brought out placing the engines on the wings, which makes them exposed to the enemies' fire. Outside of that, if anything should happen to strain or break the wings, it would entirely put the machine out of commission, because the engines are placed on the wings and the machine would collapse. In this type of machine every bit of machinery, the driving mechanism and everything is inside of the body of the machine, where it should be, and thus is protected from enemy gunfire.

Mr. MAGEE. Have you produced an observation machine?

Dr. CHRISTMAS. Our purpose up to the present time was to produce a pursuit plane for the avowed purpose of driving the enemy off the field, which could be done only by a pursuit plane. The observation plane would be of no service whatsoever after the Hun had been displaced, because that was the purpose of the planes in the beginning. The observation plane is a very small plane, which requires no special speed and it only requires another seat.

The pursuit plane is the highest type of plane we know anything about.

Mr. MAGEE. What do you designate the type you are producing now?

Dr. CHRISTMAS. We are at present developing machine for commercial purposes, on account of the enormous demand.

Mr. MAGEE. What do you call them; are they observation planes?

Dr. CHRISTMAS. Yes; we call them an observation plane.

Mr. MAGEE. And not particularly a military plane?

Dr. CHRISTMAS. No; but the best observation plane I have found to be a 3-place machine. That I called the War Department's attention to, that the 2-place machine did not have a sufficient number of men to properly make the observation. I made the point that the planes should have a driver who should do nothing whatsoever except drive the machine; that there should be a photographer who did nothing but take photographs; and that there should be a third man who should be general observer—all three of those men should be independent of one another. The Curtiss Co. developed a 2-place observation machine, as they call it; but it was not anything different from any other type they had been using, and because it was a 2-place machine they determined to use that 2-place machine, and it failed.

Mr. MAGEE. I take it, that in your judgment, there existed throughout the war an aircraft problem?

Dr. CHRISTMAS. Absolutely.

Mr. MAGEE. There is no question in your mind about that?

Dr. CHRISTMAS. None whatsoever.

Mr. MAGEE. Do you know anything about it—who had any knowledge of it?

Dr. CHRISTMAS. The only tangible thing I can say in that regard, Mr. Chairman, is that men come to us and tell us all sorts of stories about what they have heard and found out, but they are not willing to come here with me to Washington and tell what they know.

Mr. MAGEE. If you have any knowledge from your own observation and experience, what improvements there should be, the committee would like to have it.

Dr. CHRISTMAS. From what I have observed by close examination, from the way I have been treated both in this city and other places and in Dayton, it is my candid opinion that the automobile interests got together and just concluded here was a whole lot of money, and they proceeded to take advantage of the situation and build airplanes at the smallest possible cost to themselves and at the highest possible price they could sell them to the United States Government, the result being a disbursement of the taxpayer's money and bond buyer's money and no results whatsoever. I think that was brought out pretty well in the Hughes investigation. Mr. Hughes, in some of his statements, made it plain that he believed such a thing existed.

Mr. MAGEE. It has been stated that after airplanes had been ordered sent abroad, the order was revoked, and they were sent to the flying fields in this country. Do you know anything about that?

Dr. CHRISTMAS. I have no personal knowledge of that, only the evidence of men who have seen such action. There is a man right now in my office, Lieut. Hosp, who was stationed at the Ellington Field, told me that machines were deliberately put out in the field in the weather for the purpose of destroying them, so far as he could observe.

Mr. MAGEE. The weather affected the motors and the instruments on them?

Dr. CHRISTMAS. Yes, sir; and after they had been there a certain length of time they would be considered inoperative, out of date, obsolete scrap and thrown aside, some of them without ever having been flown at all. That was to stimulate the building of more machines of the same type and character.

Mr. MAGEE. What, in your opinion, if I may ask you, Doctor, would be an efficient remedy to promote efficient air service?

Dr. CHRISTMAS. There is but one solution to it, and that is intelligent cooperation and coordination of certain men in this country who are entirely capable and able of giving to this country the first type of airplane in the world to-day without question.

Mr. MAGEE. What means would you suggest to bring about the desired result?

Dr. CHRISTMAS. A complete reorganization in the Air Service. That Air Service should be organized from the beginning—I mean by that, that there should be a secretary of the Air Service, and he should be a man of efficient, executive ability and practical sense, and have complete control of the situation.

Mr. MAGEE. What do you mean by that, that there should be a department of the Government devoted to the air service?

Dr. CHRISTMAS. Yes, sir; a cabinet member, who should be a man of high education, as far removed from possible political influence as might be.

Mr. MAGEE. Have the responsibility concentrated somewhere?

Dr. CHRISTMAS. Exactly so, and he should be a man, as I said before, particularly well qualified for his work; that is to say, he should be a man of high education and high cultivation.

Mr. MAGEE. Is there any other fact which, in your judgment, would be of interest and benefit to the Government that has not been enlisted from you, which you desire to state to the committee?

Dr. CHRISTMAS. Yes, sir; I positively declare that the present type of airplane as used by the United States Government can not be made satisfactory by any circumstances however favorable.

Mr. MAGEE. You mean the De Haviland 4?

Dr. CHRISTMAS. Yes, sir; it can not be improved. There is not a type of machine that the Government uses to-day that can be improved one particle in its flying qualities or ability.

Another thing, a type of machine such as I am describing can not be improved of the size of this bombing machine, because it represents a parallel truss. That machine [indicating] is built on the cantilever truss principle. If it was necessary to do so, we could build a cantilever machine a thousand or fifteen hundred feet across the wings. A parallel truss machine is limited to a very short span, and for that reason alone it could not be developed into a large commercial or military operating machine.

Mr. MAGEE. How does the speed of your machine compare with the German Fokker?

Dr. CHRISTMAS. The German Fokker was a type of plane which was gotten out for specific purposes; that is to say, it was a pursuit fighting plane pure and simple, and the prime factor in the designer's mind was speed. If they could design a plane which was even one mile faster than the Allies' plane, it would certainly succeed in shooting the Allies' planes from the sky, because they could out maneuver them. The type of plane as represented there by the Christmas Bullet, our latest production, is at least from 45 to 55 miles an hour faster than the fastest plane the Germans have ever developed.

Mr. MAGEE. How fast a plane do you claim that your company can produce?

Dr. CHRISTMAS. We can produce a machine, under normal conditions, which will fly 175 or 180 miles an hour; under favorable conditions, with the necessary equipment, of course, we can develop planes that will fly 200 miles an hour; in fact, we have designs coming on for that very purpose.

Mr. MAGEE. How high in the air?

Dr. CHRISTMAS. What you mean, technically, is "ceiling"?

Mr. MAGEE. Ordinarily, how high do you say that your machines could travel at the rate of 155 or 200 miles an hour?

Dr. CHRISTMAS. The fastest height that you can fly a machine is at the height of under 5,000 feet. When you get higher your speed decreases. But on account later development in the carbureter it has been found that by feeding an extra amount of oxygen to the engine the full horsepower of the engine can be developed. Under those circumstances, at a height of 18,000 or 20,000 feet, the plane would possibly fly 250 miles an hour.

Mr. MAGEE. What speed has the Spad, ordinarily?

Dr. CHRISTMAS. The Spad has a speed of 122 to 127 miles an hour.

Mr. MAGEE. And that of the Nieuport?

Dr. CHRISTMAS. About the same. They did reach a certain point where the resistance curve in the design crosses the engine power curve. After that, putting on more power and changing the machine does no good.

Mr. MAGEE. What is the greatest speed of your machine, according to your observation?

Dr. CHRISTMAS. About 200 miles.

Mr. MAGEE. An hour?

Dr. CHRISTMAS. Yes; I wish to bring up something here which is very important: On account of the inefficient wing design of the present type of machine—that is to say, the type of machine which is being used by the Army and Navy—it can not carry a very great load; the wing design is so poor that it is inefficient in carrying a load. Our planes carry a very, very much higher load. For instance, that Christmas Bullet, with only 200 horsepower, can carry a load as high as 15 pounds to the square foot.

Mr. MAGEE. How many persons are required operating that machine?

Dr. CHRISTMAS. One or two.

Mr. MAGEE. You make both one and two seaters?

Dr. CHRISTMAS. Yes; one, two, three, and five seaters. With a load of 13 pounds to the square foot, the Bullet succeeded in leaving the ground in one or two of our tests at about 75 yards. It has a lower landing speed than any machine in existence, which is a very necessary thing in military operations as well as in civil operations.

Mr. MAGEE. Are there any further facts that you want to tell the committee? If not, I will turn you over to my colleague, who probably desires to ask you some questions.

Dr. CHRISTMAS. These planes that come from my designs, I want to say, with half the horsepower can carry more loads than other machines. As an illustration of that, the Curtiss Wasp, which had a horsepower of about 450, succeeded in flying 151 miles an hour with 400 horsepower. Our machine with 200 horsepower succeeded in flying 40 miles an hour faster than that—with half the horsepower.

Mr. LEA. In your judgment, is the greatest opportunity for the development of the completed airplane in the engine or in the plane itself?

Dr. CHRISTMAS. Answering that question critically, I would say that both developments are necessary, but more particularly in the plane, because with a stated horsepower you can get certain results, good or bad, as regards the design of the plane.

Mr. LEA. As I understand your criticism of the airplane, it is fundamental rather than in detail?

Dr. CHRISTMAS. Yes; exactly.

Mr. LEA. That the principle on which the airplane is made is mechanically not justified?

Dr. CHRISTMAS. It is totally unjustified, because there is no simulation of nature for that design.

Mr. LEA. And the main advantage that your plane gains over the principles of the ordinary plane, as I understand it, is to conform to the principle of the bird in flight?

Dr. CHRISTMAS. Exactly.

Mr. LEA. Will you explain how you get that condition in your plane? The flexibility, as I understand it, is the feature of it?

Dr. CHRISTMAS. Yes. In the parallel truss machine, as exhibited here in this type [exhibiting picture on cover of Scientific American], you will notice that these planes are parallel to one another, and that is why we call it a parallel; and they have struts in here [indicating], which are braced together with crossed wires. The parallel truss is such an inefficient truss that it has to take away from the cantilever some of its features to be mechanically strong enough to hold itself together.

These wires [indicating] have a tremendous resistance. These struts have a tremendous resistance. You would be astounded to learn of the resistance of these wires to the passage of the machine through the air, which is so great that it represents a flat surface of about 4 inches in breadth, because the wire is vibrating this way [illustrating] and the width of that disturbance is as thick as the vibration of the wire.

To get an efficient machine, even allowing that this parallel wing design is to be left as it is, if this were omitted you would get a very much higher speed machine. But on account of this stiff wing dragging through the air like it was being dragged through sand or through some element which stuck to its wings—the reason for that is because a wing does not move and will not relieve itself to the passage of these wind currents, don't you see? If you then design a wing which closely simulates the bird's wing, which is flexible, then that wing will form or shape itself in the slip stream or air current, and produce the best lift and drift qualities; that is to say, the lift itself and the drift means forward motion of the machine.

Mr. LEA. So, if I get your argument, the fundamental advantage to be gained by your plane is to reduce the opposition of the air?

Dr. CHRISTMAS. Exactly.

Mr. LEA. And you would gain that in two ways; one is by decreasing the surface that meets the air?

Dr. CHRISTMAS. Exactly.

Mr. LEA. And the other is by increasing the flexibility of your planes?

Dr. CHRISTMAS. Exactly; this flexibility allowing the wing to exactly fit itself into the various inequalities of the air which attacks the wings. This is very clearly demonstrated when the bird is flying, indeed, you can see the bird's wings doing that.

Mr. LEA. What is the mechanical construction of your wings that permits the flexibility?

Dr. CHRISTMAS. The wing is built out of a combination of laminated wood and steel—high grade, spring steel.

Mr. LEA. How does the weight conform to the wings of an ordinary aeroplane?

Dr. CHRISTMAS. The wing is heavier.

Mr. LEA. I am not finding fault with your machine, but I just want to get your explanation. Here you have the wings [indicating picture]; what width would that represent?

Dr. CHRISTMAS. That is 28 feet.

Mr. LEA. And your only connection is here [indicating] at the body of the machine?

Dr. CHRISTMAS. Yes.

Mr. LEA. I assume that this construction would necessarily be a good deal heavier here [indicating] than in double trusses?

Dr. CHRISTMAS. Oh, yes; considerable.

Mr. LEA. And what would your wing weigh compared with the truss?

Dr. CHRISTMAS. It would be at least twice as heavy as a truss machine, but the point you are raising is not only applicable, but it can be explained why I am able to give away all of that weight for the strength, by stating that that efficiency lift of that wing is away in excess of the ordinary type of wing section.

Engineers have repeatedly said to us, "Why do you wish to make a machine so strong?" "What is your idea?" I do not see why they should ask a question of that sort, because I can not conceive of an airplane being made too strong, because it is subjected to very rough usage both on the ground and in the air.

Mr. LEA. You are the designer of this plane, are you?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. Do you manufacture any engines?

Dr. CHRISTMAS. No, sir; we do not manufacture engines. We will go into the production of engines later on.

Mr. LEA. What kind of engines have you used in the tests made by your machines?

Dr. CHRISTMAS. The Liberty 6 engine, which the Government first started to make, and also the Hall-Scott motor.

Mr. LEA. You used those two engines in the same type of machines?

Dr. CHRISTMAS. Yes. The Hall-Scott motor is lighter than the Liberty 6, and they developed 62 horsepower more.

Mr. LEA. The Hall-Scott is made in Oakland, is it not?

Dr. CHRISTMAS. I think it is Berkeley, Calif.

Mr. LEA. I noticed in the Aerial Age here, on page 948, you give a picture of a Bullet-Strutless and wireless biplane which makes a speed of 170 miles an hour?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. To what elevation could that speed be made?

Dr. CHRISTMAS. That is what we call "ground elevation"; that is to say, anything within 5,000 feet.

Mr. LEA. And where was the test made?

Dr. CHRISTMAS. The test was made at Mineola, and it was made also at Field No. 5.

Mr. LEA. Have you had any more favorable tests than that; that is, that it would produce any greater speed?

Dr. CHRISTMAS. Yes; our machine that you see represented there [indicating] the last one we got out, has 220 horsepower Hall-Scott motor in it, which is considerable faster—about 200 miles.

Mr. LEA. This 170-mile test was made with a Liberty motor?

Dr. CHRISTMAS. Yes, sir; with a 185 horsepower Liberty motor.

Mr. LEA. That is the smallest Liberty motor, is it?

Dr. CHRISTMAS. Yes, sir. The Government went out of the production of that motor. I asked Col. Vincent what the idea was. "Well," he said, "I do not know," and he evaded the question all the time. I told him on account of its being a tandem motor; that is to say, all the cylinders were in line [illustrating] and this way [illustrating] a very narrow aspect machine could be made which would necessarily develop a high speed if properly designed. He admitted that that was true, and he said that he believed it was a good thing to manufacture, but he said "They had concluded"—I do not know who "they" were—that "they would not manufacture any more." I really believe it was because it was such a close imitation of the Hall-Scott motor that they concluded that they would not give the Hall-Scott motor a chance to build it. They gave the Hall-Scott motor very little work to do.

Mr. LEA. That is just your conclusion of the matter, is it not?

Dr. CHRISTMAS. No; Col. Hall told me that.

Mr. LEA. He is the manufacturer of the Hall-Scott machine?

Dr. CHRISTMAS. He is the designer and also the manufacturer of the Hall-Scott machine. The firm is the Hall-Scott Motor Co.

Mr. LEA. When was your company organized—the Cantilever-Aero Co.?

Dr. CHRISTMAS. Probably about a year ago.

Mr. LEA. Where was it incorporated?

Dr. CHRISTMAS. Delaware.

Mr. LEA. And had the business of this company been conducted before that time under another name?

Dr. CHRISTMAS. Yes; at one time I had a company called the Christmas Aeroplane Co. That went out of business. But Mr. McCoy and myself and some of our friends got together, with our own private capital, and developed these machines for the purpose of giving to the Government a good aeroplane, and we have spent out of our own pockets about a quarter of a million dollars, without one particle of encouragement of any character whatsoever from the Government.

Mr. LEA. When did your company first begin to manufacture the planes?

Dr. CHRISTMAS. About a year and a half ago.

Mr. LEA. Was that before this company was incorporated?

Dr. CHRISTMAS. Oh, yes.

Mr. LEA. You had a shop for the manufacture of them?

Dr. CHRISTMAS. Yes.

Mr. LEA. And when did you make your first tests—your first flights with your machine?

Dr. CHRISTMAS. December 5.

Mr. LEA. 1918?

Dr. CHRISTMAS. Yes.

Mr. LEA. Was that about the time you made the flight at Mineola?

Dr. CHRISTMAS. About the time we made the flight at Mineola, on December 7.

Mr. LEA. Your machine was not in actual production until recent months; that is, after the war was over?

Dr. CHRISTMAS. The machine is built in such a way that its parts are at least 50 per cent less than the other type of machine. It was designed and built for the purpose of production. It is very easily assembled. It does not require an expert to assemble it. The other machines do. It has hardly one-half the working parts that the other type of machines have. It can be taken down in 10 minutes and it can be put together inside of a half an hour, complete, and sent out on its flight; and its woodwork and framework is designed and built in such a way that they could be put into enormous production immediately.

Mr. LEA. How many different types of machines have you actually made?

Dr. CHRISTMAS. There are only two types that you can make, the pusher and the tractor type; you either have got to put the screw in front or behind.

As regards the monoplane or biplane, there are only two types that can be made—monoplane or a biplane. I have made both of those kinds.

Mr. LEA. I had reference to difference in size as well as in design. I think they wanted to know to what stage you had progressed?

Dr. CHRISTMAS. I made machines all the way from 86 feet across the wings down to 24 feet.

Mr. LEA. How many machines have you completed, including the machine ready for operation?

Dr. CHRISTMAS. Since we have been manufacturing, you mean?

Mr. LEA. Yes.

Dr. CHRISTMAS. On Long Island?

Mr. LEA. I mean your total finished product.

Dr. CHRISTMAS. We have only built with the capital we had two machines. We have in course of construction just now six more.

Mr. LEA. There was no time prior to the conclusion of the war that you had a finished machine to test with and demonstrate in actual flying, was there?

Dr. CHRISTMAS. No.

Mr. LEA. When you went to the War Department with the bombing machine that you refer to, that was purely a design?

Dr. CHRISTMAS. Yes.

Mr. LEA. It was not any machine that you could demonstrate with?

Dr. CHRISTMAS. No.

Mr. LEA. Is it not your idea that perhaps it was more difficult for you to get a hearing from the fact that so many designers and inventors were pressing their claims upon the department?

Dr. CHRISTMAS. No, sir; it certainly was not my idea. In the first place, they should have known. It was easy enough for them to know that the study I have been so closely following for 27 years should have

given me the necessary reputation before the War Department before any other investigator. They should have taken me into confidence on the subject of the construction of any kind of machine, regardless of anything.

Mr. LEA. Assuming your machine was meritorious, do you not realize that it was more difficult for you to get a hearing on account of the fact that so many designers and inventors and manufacturers were pressing their claims upon the department?

Dr. CHRISTMAS. No, sir; I do not believe anything of the sort. I believe it was purely because they knew I did know.

Mr. LEA. What had anybody to gain by that supposition, assuming that was true?

Dr. CHRISTMAS. Because it would mean complete elimination of that type of machine.

Mr. LEA. What difference did it make to those who were conducting this war if you did eliminate this type. If it was a question of first ascertaining the best type, that should have been their duty unquestionably?

Dr. CHRISTMAS. Yes.

Mr. LEA. In the next place, it was a question of manufacture.

Dr. CHRISTMAS. Unless the Government shut right down and said, "Well, you must not build any more of those machines; you must build this type of machine," that would have been all right?

Mr. LEA. What I mean is what motive did the War Department have that would mean anything to them to accept the inferior type instead of the best type, going to the question of motors?

Dr. CHRISTMAS. The people who were building this type of machine had a considerable amount of money invested.

Mr. LEA. But this machine was not designed at the beginning of the war?

Dr. CHRISTMAS. Oh, yes.

Mr. LEA. I want to get your judgment on this question if I can make myself plain: At the beginning of the war it was immaterial, so far as they were benefited, what the design was, if they had the power to assign the construction to whoever they pleased, the design was immaterial?

Dr. CHRISTMAS. You are intimating there that they did have the power?

Mr. LEA. I assume they did; yes.

Dr. CHRISTMAS. I do not believe that.

Mr. LEA. That they did not have the power to assign the work wherever they pleased?

Dr. CHRISTMAS. No, sir; they did not. I did not think so. That is my own opinion. The power was outside the War Department.

Mr. LEA. Even supposing it was outside—of course, that is arguing about a matter of conclusion—but, to get at your views, if the people outside had the power and the Government once selected a design, whether it was yours or somebody else's, they could assume the manufacturing of it if they wanted to, going on that assumption?

Dr. CHRISTMAS. The War Department could?

Mr. LEA. No; whoever had the power to say where the Government machines could be manufactured had the power to say that the Curtiss people, the Dayton-Wright people, or somebody else could manufacture?

Dr. CHRISTMAS. Yes.

Mr. LEA. If you had a patent, as I understand you have, you could say, "You must give me so much for my patent," but the Government could say who would build the machines, or whatever the dominating power was. So I do not get the force of your suggestion as to the motive in reference to construction.

Dr. CHRISTMAS. You see this type of machine has been in use for a great many years, and all the jigs and templets and frames and all that sort of thing were perfectly well known, and it was just like making a pair of shoes, and they knew just what to do in this regard and had everything ready to do it with. They preferred to manufacture this type of machine [indicating]. It was not a question with them of developing a high-grade or high-class machine, but a question of making machines and getting money for them.

Mr. LEA. Do you not think there were men concerned in the aircraft production that were just as patriotic as you or I am, concerned with the management of the aircraft business; that is, saying nothing about their ability in that line, but so far as the motive was concerned?

Dr. CHRISTMAS. Undoubtedly I believe that. But the only thing I can say to you in answer to that is that I did not find them; I did not come in contact with them.

Mr. LEA. Just who were the ones you came in contact with who were not patriotic?

Dr. CHRISTMAS. Not once did I come in contact with them.

Mr. LEA. How many men did you meet in your connection with the War Department and this aircraft business?

Dr. CHRISTMAS. I do not know; I met a great many of them, all the way from lieutenants up to the Secretary of War.

Mr. LEA. About what height are bombing operations ordinarily carried on?

Dr. CHRISTMAS. Bombing operations, under conditions which are remote from artillery practice, are carried on at as low an elevation as possible, because of the certainty of destruction. Where there is close proximity to artillery practice, they must get as high as possible to keep shrapnels from tearing the machine to pieces. Bombing operations have taken place as high as 16,000 feet.

Mr. LEA. But what would you say was the height in practice?

Dr. CHRISTMAS. In practice I should say about a mile.

Mr. LEA. You spoke of the De Haviland in particular. As I understand you, the same objection applies to it, fundamentally, as applies to every other machine the Government uses.

Dr. CHRISTMAS. Precisely.

Mr. LEA. And practically every machine of the Allies also?

Dr. CHRISTMAS. Exactly.

Mr. LEA. Did Germany make that same mistake?

Dr. CHRISTMAS. She tried to get away from it as much as possible in the Fokker machine. She discovered her mistake. They were handicapped early in their aircraft production because of lack of materials, but they did develop a machine called the Fokker, which afterwards became a biplane as well as a monoplane. The first Fokker was a monoplane with very high speed, and afterwards they brought out a biplane Fokker.

Mr. LEA. Those wings are supported by wire braces in the Fokker. are they not?

Dr. CHRISTMAS. No.

Mr. LEA. They are on the same general plan as yours?

Dr. CHRISTMAS. Yes; they have a strut, however, in between the wings, but no tension of brace wires.

Mr. LEA. Your plan of machine is consistent with the biplane or not?

Dr. CHRISTMAS. Monoplane and biplane both.

Mr. LEA. That feature is applicable to both?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. In reference to the statement of Lieut. Hosp, what is his position in reference to your company?

Dr. CHRISTMAS. He is employed at present by our company; yes, sir. He was a total stranger, of course, when he applied for a position.

Mr. LEA. You know nothing about the facts to which he made reference?

Dr. CHRISTMAS. None whatever, sir.

Mr. LEA. Was he in the service during the war?

Dr. CHRISTMAS. He was. He was a very fine flyer. He understands the mechanics of flying and construction; and he was also a stunt instructor and a cross-country flying instructor.

Mr. LEA. Did you call attention of the department to your design in reference to bombing planes at any time after the letter you wrote to Gen. Squier April 7, 1917?

Dr. CHRISTMAS. I did everything I could, sir, to make Gen. Squier appreciate the fact that the type of machine which should be the determining factor in this war would be the bombing plane.

Mr. LEA. Did you take up the construction of that model with anybody in the War Department?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. With whom did you take it up?

Dr. CHRISTMAS. I took it up with Gen. Squier, Gen. Saltzman, Col. Mitchell, Col. Clark, Col. Payne, and, my goodness, I do not know how many others.

Mr. LEA. What, in substance, did they tell you was the reason why they would not adopt your plane?

Dr. CHRISTMAS. I never could get the slightest bit of anything definite from them at all. It was always, "You go and see So-and-so," and later I would see So-and-so, and he would say, "What did you come to me for? You go and see So-and-so," and after I had passed that buck around in every direction, I would come back to the Secretary of War, and he would say, "What do you come to see me for, Doctor? I do not know anything about aeroplanes."

Mr. LEA. So you never got anybody that would turn you down, absolutely?

Dr. CHRISTMAS. No. [Laughter.]

Mr. LEA. In reference to the request that was made that your machine be sent to the McCook Field for test, who made that request, or was that your suggestion?

Dr. CHRISTMAS. They insisted upon it being sent there.

Mr. LEA. Who insisted upon it?

Dr. CHRISTMAS. Col. Vincent.

Mr. LEA. Had you been at the McCook Field before that?

Dr. CHRISTMAS. Yes.

Mr. LEA. In reference to having your machine tested?

Dr. CHRISTMAS. I went there first to see whoever was in authority, and that was Col. Vincent at the time, and Col. Vincent was really very nice. He listened very patiently to what I had to tell him, which occupied a session of possibly an hour or an hour and a half. He agreed with me in what I had to say, and I was really pleased with the interview, believing that something was really going to come out of it. When I got back and began to correspond with him, it all petered out.

Mr. LEA. What date was that statement made in which they requested to bring it there?

Dr. CHRISTMAS. June 13, 1918.

Mr. LEA. Your machine had not been in the air up to that time, had it—in fact, it was not assembled at that time, was it?

Dr. CHRISTMAS. We were waiting for the motor. It was assembled, but the motor had not been received from the McCook Field.

Mr. LEA. What is meant by the "sand test"?

Dr. CHRISTMAS. That should be thoroughly understood by this committee, because it is so essential to the development of aeroplanes. When engineers wish to build a bridge, and particularly if that bridge is a parallel-truss bridge—a cantilever or truss bridge would have no reason for sand testing, because they know in the beginning that bridge is all right, because it is a cantilever bridge—but a parallel truss would represent like this piece of paper [illustrating], and another one right underneath like that, and it has struts in connection with it connected with bridge wire, like you see there [indicating]. The integrity of that truss is entirely dependent on the breaking of those wires—not the truss, but the wires. The reason that the truss is weak is because these straining members, top and bottom, like in the same plane, are parallel to one another, so that when a weight is put upon it, as soon as the upper member begins to break down then the lower member begins to break down, because they are the same distance apart. And a lot of sand bags are put on this truss and evenly distributed on there or distributed in spots, and you can very readily determine what is the strength of that truss, because it is a stiff truss, and it has a more definite mathematical formula.

If you then wish to determine the strength of another truss which has a capacity of vibration which is so great that its amplitude, as it is called—that is, its bending, to such a degree that you put a load on it, the load would bend it down, but it won't break it. In this type [indicating] of truss it will break it right through, because the truss will hold together as long as the wires remain intact; as soon as they give way the whole structure completely disassembles itself.

Civil engineers know this to be so true that their strongest type of bridge construction is the cantilever type, which has been developed through general knowledge, of which the piano wire bridge or the suspension bridge is also a type.

Mr. LEA. The substance of it is that it is simply a question of strength?

Dr. CHRISTMAS. It is simply a question of strength in building a type of structure. You can understand, of course, that if a load was

put on a yielding structure that the same mathematical formula could not be used in determining its strength that you would use in this [indicating].

Mr. LEA. It might give, but nevertheless it would hold the same load?

Dr. CHRISTMAS. Exactly so. I discovered that years ago.

Mr. LEA. Is there anything about this test that would cause your machine to be eliminated simply because it would give?

Dr. CHRISTMAS. Exactly; that sand test could not be used on this and get any results. I said to them, "You can put the sand on it; you can load it to the capacity of breaking all to pieces, but you get no mathematical results from this test, because you are doing two dissimilar things."

Mr. LEA. Was your objection to the fact that they were applying what you regarded as an immaterial test?

Dr. CHRISTMAS. Exactly, a foolish, immaterial test.

Mr. LEA. And it was not the fact that they wanted to test it?

Dr. CHRISTMAS. Oh, no; certainly not.

Mr. LEA. Did you suggest any other method as a proper test?

Dr. CHRISTMAS. Yes; I said to them this: "I will not only go into conference with you; I will not only discuss this matter to the last limit of discussion, but I will give you all my information, all my knowledge on this subject. The only thing I want to do is to disassociate you from this operation, this inoperable plane, which can not be improved upon."

Mr. LEA. Did Col. Vincent or anybody in authority base any opposition to your applying any other test that you wanted to your machine?

Dr. CHRISTMAS. Yes, sir. They won't apply any other test. They will say "Sand test; if you don't like the sand test, get out."

Mr. LEA. Have you the correspondence in regard to that?

Dr. CHRISTMAS. I would like to say to the committee that in building machines or anything for the Government it is the most thankless task in the world, because it takes you an awfully long time to get your money—after you have completed your work. So, I could not by any manner of means be charged with a disposition to criticize the Government. I do not want to do that. What I am criticizing, and rightly so, is the methods. I am criticizing a condition of affairs here which will positively result in nothing. It will take you nowhere; it will leave you some place and leave you there for good, too.

The Government is about to expend an amount of money on aeroplanes again. Not a billion, but a great many millions, but they are going to do the identical same thing they did before, in the face of all of this opposition, and in face of all this information that has been given to them, and that money is going in the same direction precisely that the other billion and a quarter went—the same thing is going to happen.

Mr. LEA. That is because the machine they have can not be improved.

Dr. CHRISTMAS. No, sir; it is not properly designed and is entirely at variance with natural law, and you can not ever make anything operable if you do not recognize the laws of nature; you can not do that. It has never been done yet.

Mr. LEA. Now, let us have that correspondence.

Dr. CHRISTMAS. As far as the financial side of the proposition goes, the Government's business is not attractive to our concern in any manner. We have enough business from private interests to keep us busy as long as we like.

Mr. LEA. They were willing to supply you with the engine providing you would install it. That is a Liberty 6; they say:

We are perfectly willing to let you use this engine to put up the plane and try it, providing that you will help us to safeguard it as follows: We will ship it to you for installation in the plane, and after it has been properly installed you will ship the plane to the McCook Field, shipping at the same time a spare plane of exactly the same construction, so that we can test it and determine whether it has a proper factor of safety. We would also reserve the right to have more engineers go over the plane after it is received here and check it areodynamically, and make sure it is in condition to make a successful flight.

These precautions may seem elaborate to you, but we have lost several Liberty 12 engines from crashes, where we were not permitted to take the precautions outlined above. This, of course, was serious enough in the case of the Liberty 12, as everyone is needed, but it would be much more serious in the case of the Liberty 6, as we only have one available. [Continues reading:]

I am giving orders to have our Liberty 6 put in condition, which will take three or four days, and if I receive a wire from you that you are willing to handle this matter as outlined above, I will have the engine shipped to you promptly.

By authority of the Director of Aircraft Production, J. G. Vincent, lieutenant colonel, United States Army, Chief Engineer.

Dr. CHRISTMAS. They would not budge one inch from the procedure that they had been following for an indefinite and indeterminable time.

Mr. LEA. In substance, they reserved the right to make their own tests?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. Is your reply to that letter here? Was any objection ever made to your being there to watch the tests they made?

Dr. CHRISTMAS. No.

Mr. LEA. Could you not, by your own presence, have protected your machine against any unjust test?

Dr. CHRISTMAS. Certainly not.

Mr. LEA. Why not?

Dr. CHRISTMAS. Why, after I had given it to them and put them in complete control of the testing of this, I could not have done anything. I could protest against that procedure.

Mr. LEA. Why do you say they wanted to break the machine up; is it because it would not stand this particular sand test?

Dr. CHRISTMAS. No. I felt from the way the whole proposition was handled there was a very strong disposition to have my machine come there and smash it up—just tell me "that won't do, Doctor." That very important point was brought out in the Hughes investigation.

They will determine just how much financial help some of those poor devils had that were fools enough to send their plans there and having found that out they would smash their machines up.

Mr. LEA. Did you see any of those tests?

Dr. CHRISTMAS. I did not see them. I am just telling you what came out in the Hughes investigations.

Mr. LEA. They made similar tests of a great many machines, did they not?

Dr. CHRISTMAS. Yes.

Mr. LEA. What I am getting at is, have you any specific evidence that justifies you in saying that was their purpose in breaking your machines?

Dr. CHRISTMAS. I have no specific facts. You mean did I ever hear anybody say that?

Mr. LEA. Yes.

Dr. CHRISTMAS. No; but the attitude of these men toward me was enough to tell me.

Mr. LEA. They did not receive your proposition with any friendliness, you mean?

Dr. CHRISTMAS. None whatever. I could not get the slightest bit of cooperation and friendliness or disposition to do the thing right.

Mr. LEA. So your belief is they wanted to break your machine up and that was your own conclusion for that reason?

Dr. CHRISTMAS. Yes.

Mr. LEA. Now, you spoke of Germany having made a large offer to you for your services; when was that?

Dr. CHRISTMAS. That was before this country entered the war!

Mr. LEA. And do you recall the exact date?

Dr. CHRISTMAS. No; I can not recall that.

Mr. LEA. By whom was the offer made?

Dr. CHRISTMAS. It was made through certain German agents.

Mr. LEA. Do you have any reason that you would prefer not to give their names?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. But they did not ask you to commit any offense or anything of that kind, did they?

Dr. CHRISTMAS. They wanted me to get out of the country.

Mr. LEA. For what reason?

Dr. CHRISTMAS. So that I could not give my services to this country.

Mr. LEA. Why do you say that?

Dr. CHRISTMAS. Because they thoroughly appreciated my knowledge on the subject; they thought that the knowledge I possessed would be of considerable annoyance to the German affairs.

Mr. LEA. Their object, then, was to deprive the country of your knowledge and skill more than it was to give it to Germany.

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. Did the terms on which they made that offer involve your leaving this country and going to Germany?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. For how long?

Dr. CHRISTMAS. Three years.

Mr. LEA. Nominally were you to perform any service in Germany?

Dr. CHRISTMAS. I certainly was; I was to develop their air forces.

Mr. LEA. Any particular character of work that you were supposed to perform for which they made this offer?

Dr. CHRISTMAS. Yes, sir; I was to develop the aeroplane for military use.

Mr. LEA. Why do you say that the main purpose was to deprive this country of your services?

Dr. CHRISTMAS. Because they knew of my ability in this matter.

Mr. LEA. What reason did they have to know that this country was going into the war at this time? How did they expect to benefit by depriving this country of your services—

Dr. CHRISTMAS (interposing). They knew perfectly well that this country was going into war with Germany as well as other people knew it. That was just before the war broke out. I don't think it was difficult to know that.

Mr. LEA. Did they make any statement to you that that was the object?

Dr. CHRISTMAS. No, sir.

Mr. LEA. The pretense was another thing, was it?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. Now, you spoke of the difficulty of getting those photos; as I understood you did not make any request that the Government make these photographs that were made by the Government people?

Dr. CHRISTMAS. No, sir.

Mr. LEA. Was the trouble about photographs taken by Government men or taken by you?

Dr. CHRISTMAS. Oh, no; whenever a machine goes out into the air, whether a Government machine or any other machine, if it is in the time of day so that a photograph can be taken; there is an order that such machine shall be photographed while in operation.

Mr. LEA. I may have misunderstood you; I thought it was due to the difficulty with the men in control; was it that or was it because of physical operations?

Dr. CHRISTMAS. No; the difficulty was here: They took these photographs by the Government photographer, and they were not our property and they were taken for a record like other photographs are taken, and when I applied at the Mineola Field for copies of these photographs they told me they could not find the plates; they were either mislaid or destroyed, which is a ridiculous thing, because nobody is allowed to destroy Government property, unless for some specific reason.

Mr. LEA. How soon was that after it was taken that you applied?

Dr. CHRISTMAS. A few days or a week.

Mr. LEA. Now, do you know whether or not it was not the rule of the War Department that the pictures of that kind were not subject to distribution of that kind until after the 1st of January?

Dr. CHRISTMAS. They did not tell me that; they did not say, "Doctor, I am sorry we can not give you these because it is against the rules of the Army service."

Mr. LEA. This man that finally did give you the copy, what connection did he have in that field?

Dr. CHRISTMAS. He was at that time, I think, in charge of the photographic department.

Mr. LEA. Now, to whom did you first apply for the privilege of flying your machine at Mineola?

Dr. CHRISTMAS. To Gen. Kenley.

Mr. LEA. And where? Was that at the time you referred to in your testimony—at the time when Gen. Kenley and some one else was present in New York?

Dr. CHRISTMAS. No; that was a considerable time after that.

Mr. LEA. And his attitude was favorable on the first occasion, was it?

Dr. CHRISTMAS. Gen. Kenley's attitude was, I construed as favorable, yes; he did not seem opposed to anything I wanted to do, but in his development of the question he slowed down and he retrenched.

Mr. LEA. Well, did you take it up with him at any other time after this conversation in New York which you have already related?

Dr. CHRISTMAS. Yes; I remember taking that up with Gen. Kenley twice; I think that it was in Washington here.

Mr. LEA. But the end of it was that you were given the privilege?

Dr. CHRISTMAS. The end of it was that after the machine had been flown from another field into Mineola Field I was given the privilege of keeping the machine there for a reasonable time, and after a while they came around and said, "What time are you going to take it away?"

Mr. LEA. What distance did it fly to Mineola?

Dr. CHRISTMAS. About 600 miles, I should judge.

Mr. LEA. You did not have any objections to that, did you?

Dr. CHRISTMAS. Oh, no; that is the only way it could get in there.

Mr. LEA. I understood you objected to the flying of it in there?

Dr. CHRISTMAS. No; what I objected to was the attitude of the Air Service toward the machine. What was the use of taking it out and flying it into the grounds?

Mr. LEA. It was already there when they made this suggestion?

Dr. CHRISTMAS. Oh, yes; they told us to take it away from there.

Mr. LEA. How long had it been there?

Dr. CHRISTMAS. About a month.

Mr. LEA. Was that before or after these pictures were taken when they first wanted you to take it away?

Dr. CHRISTMAS. Before.

Mr. LEA. When you first approached the War Department in reference to your machines did you make any suggestions of royalties or did you want a contract, or what was your proposition?

Dr. CHRISTMAS. My proposition was absolutely one of disinterestedness so far as financial interests were concerned. I offered Mr. Baker my knowledge and everything I possessed for the benefit of my country. I told him my only object in consulting him was to give everything I knew; my services and compensation, if there were any.

Mr. LEA. At that time you were not actually engaged in manufacturing, were you?

Dr. CHRISTMAS. No.

Mr. LEA. The withholding of your patents have not in any way prevented the use of your machines for the Government, as I understand it?

Dr. CHRISTMAS. Withholding it?

Mr. LEA. Withholding the right to use your patent has not prevented the Government from making your machines?

Dr. CHRISTMAS. No; the Government could have taken my patents whether I wanted them to do it or not.

Mr. LEA. But you did not refuse?

Dr. CHRISTMAS. No, sir; on the contrary, I tried to show in every conceivable way, both by spending money and offering my services, that my desire was for my country's good.

Mr. LEA. I think that is all.

Mr. MAGEE. Now, did you have the facilities during the war to produce effective aeroplanes for military service for the Government—

Dr. CHRISTMAS (interposing). Yes, sir.

Mr. MAGEE (continuing). If the Government had encouraged or made any arrangements with you?

Dr. CHRISTMAS. Yes, sir. I most positively could have gotten all the money that was necessary to bring our machine into large production.

Mr. MAGEE. And could have produced effective machines in quantities?

Dr. CHRISTMAS. Yes, sir. The fliers from the front who have seen my machine, men who have passed through that terrible fire of the air over there could not understand to save their lives why such an effective machine should not have been over on the front.

Mr. MAGEE. Now, you spoke something about the sand test. Could the sand test be practically applied to your machine?

Dr. CHRISTMAS. It could not; no, sir.

Mr. MAGEE. That was the reason that you spoke and described the sand test?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. And that is, as I understood from the description of the construction of your machine that the sand test which they did apply and could apply to the parallel truss machine could not be applied to your machine at all?

Dr. CHRISTMAS. None whatsoever, and I went so far as to explain to them that in my practical demonstration of that fact I had taken living birds' wings—that is to say, I had placed birds on their backs in such a position that their wings could not be moved and filled their wings with cement, smoothing it out, carefully keeping the curvature of the wings, and after that bird's wings had dried in the cement, releasing the bird so he could fly; he not only could not fly, but the muscles in his chest which hold his wings to his body were torn from the bones of the chest and those same wings could be without the slightest trouble broken in two.

Mr. MAGEE. I am not a mechanic, but as I understand from the construction of the parallel truss machines the sand test could be applied, but from the construction of your machine the sand test could not be applied; is that a fact?

Dr. CHRISTMAS. Yes, sir.

Mr. MAGEE. Is there any other fact that you want to state for the benefit of the Government?

Dr. CHRISTMAS. In conclusion I wish to say this, even at this time, notwithstanding that we are so deluged with civil business, if it is possible for me to be of any service to my Government, all they have to do is to signify their intention to accept my services, and I will be very glad to place myself at their disposal and to place at their disposal all the information which I possess on this subject, and it is considerable.

Mr. MAGEE. Well, I am very glad indeed to hear you make that statement, and I wish to extend to you the thanks of the committee for coming here from New York and giving your testimony in this case, which, in my judgment, should be of material benefit to the Government.

Mr. LEA. Just one more question: What is the productive capacity of your factory?

Dr. CHRISTMAS. The productive capacity of my factory is not at the present time very great, but we shall in the near future, about the 1st of September, build a very large plant and have a very large production.

Mr. LEA. I understand during the war you could have gotten plenty of financial backing?

Dr. CHRISTMAS. Oh, yes.

Mr. LEA. You have flown in your machines, have you?

Dr. CHRISTMAS. Yes, sir; I have flown in my machine. The last machine which we have under specific discussion, the last development, I have not, sir.

Mr. LEA. Which ones did you fly in?

Dr. CHRISTMAS. The ones I developed several years ago. I gave up flying several years ago.

Mr. LEA. You have never flown in the types you have described here to-day?

Dr. CHRISTMAS. No, sir.

Mr. LEA. What was the offer made by Germany for your services?

Dr. CHRISTMAS. Germany offered me \$1,000 a day and all expenses, and three years' salary in advance in gold in any bank in New York City, or anywhere in this country, and before I left this country.

Mr. LEA. I did not understand the latter part of your answer.

Dr. CHRISTMAS. Three years' salary in advance in gold in any bank, before I left the shores of this country.

Mr. LEA. \$1,000 a day?

Dr. CHRISTMAS. Yes, sir.

Mr. LEA. That would be over \$1,000,000?

Dr. CHRISTMAS. Yes, sir; considerably over that. I would not have ever seen this country again, I can tell you that. I never had the pleasure of collecting that or of doing anything with that million dollars.

Mr. MAGEE. You could not accept such an offer as that for any monetary consideration; a patriotic citizen could not think of doing that for any monetary consideration.

Dr. CHRISTMAS. I can answer that by this: When I told Sir Cecil Spring-Rice—my office was next door to him—and he said, "I know all about it," and that old gentleman put his arm around my neck and said, "I wish to God, Doctor, I could say the same thing about every one of my countrymen; I can not do that."

There is only one thing more I would like to state here, and that is, during the war the Government had what is called priority orders for material and no manufacturer could get steel, wood, wire, nails, screws, bolts, knives, files, machinery of any description unless he had what is called a priority order; that is to say, that his order on account of Government sanction was prior to any civilian order. We applied for these priority orders to get materials to build our machines. We could not even get a priority order to build and finish our machines. We did get steel and wood and other various materials through subterranean sources to get out our products. That hurt me pretty badly, I tell you.

Mr. MAGEE. The committee will stand adjourned until 10 o'clock to-morrow morning when Mr. Fauber will be heard.

(And thereupon at 4.50 o'clock p. m., the committee adjourned until to-morrow morning at 10 o'clock.)

SUBCOMMITTEE No. 1 (AVIATION)
OF THE SELECT COMMITTEE ON
EXPENDITURES IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Wednesday, August 6, 1919.

The committee met at 10 o'clock a. m., pursuant to adjournment on yesterday, Hon. James A. Frear (chairman), presiding. Also present, Hon. Walter W. Magee and Hon. Clarence F. Lea.

TESTIMONY OF MAJ. GEN. CHARLES T. MENOHER, UNITED STATES ARMY, WASHINGTON, D. C.

(The witness was duly sworn.)

Mr. FREAR. You are a major general in the Army, I believe?

Gen. MENOHER. Yes, sir.

Mr. FREAR. How long have you been in the service?

Gen. MENOHER. Thirty-seven years.

Mr. FREAR. In the Regular Army?

Gen. MENOHER. That includes my cadet service.

Mr. FREAR. At the beginning of the war in Europe what position were you occupying?

Gen. MENOHER. I was on the Texas border at the time.

Mr. FREAR. I mean at our entrance into the world's war?

Gen. MENOHER. Yes, sir; I was on the Texas border at the time, in command of the Fifth Field Artillery Regiment.

Mr. FREAR. In what service?

Gen. MENOHER. In the border service, at El Paso, Tex., commanding a regiment of Field Artillery.

Mr. FREAR. You will briefly tell the subcommittee the different services you have been engaged in up to the present time, since you left the Texas border.

Gen. MENOHER. I went to France in July, 1917, and organized a Field Artillery school at Saumer, at which place I was stationed three months and a half. In December, 1917, I was assigned to and took command of the Forty-second or Rainbow Division, and commanded that division until a short time before the armistice was signed, a few days, when I was assigned to and took command of the Sixth Corps.

I returned to the United States in January, 1919, and after my arrival here was assigned to the position of Director of Air Service, to relieve Mr. John D. Ryan.

Mr. FREAR. In January, 1919?

Gen. MENOHER. Yes, sir.

Mr. FREAR. If you were with the Forty-second Division you certainly saw service?

Gen. MENOHER. The division was not out of the sound of German guns for nine months, and for 188 days of that time we were in contact with the enemy.

Mr. FREAR. The position that you hold at present is in the Signal Corps, and do I understand that you are in charge of the aviation branch of the service?

Gen. MENOHER. No; I hold a commission in the Regular Army of brigadier general, which takes me out of any particular branch, and I was assigned as Director of Air Service, as such.

Mr. FREAR. That is in the Signal Corps, or what?

Gen. MENOHER. It is and it is not. Under the Overman Act it was removed temporarily from the Signal Corps.

Mr. FREAR. You are not accountable to anyone except the Secretary of War—

Gen. MENOHER (interposing). Yes, sir.

Mr. FREAR (continuing). Or the General Staff?

Gen. MENOHER. Except under the recent bill the Air Service is continued as an Air Service and does not go back to the Signal Corps.

Mr. FREAR. At what time did that change occur, or when did that order or the law to that effect apply?

Gen. MENOHER. Do you mean as to the transfer of the Air Service from the Signal Corps?

Mr. FREAR. Yes.

Gen. MENOHER. In May, 1918, I believe.

Mr. FREAR. In May, 1918?

Gen. MENOHER. That is my recollection, but it is only hazy in my mind.

Mr. FREAR. That was during the time that Mr. Ryan had charge?

Gen. MENOHER. Yes, sir.

Mr. FREAR. That act provided for it?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Well, that was May, 1918?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Let me ask you, Gen. Menoher, in regard to conditions as you find them here at the present time. There is going on the discharge of many men, I suppose officers and others?

Gen. MENOHER. That has been our principal work since I came back from the other side.

Mr. FREAR. And it disorganizes the service, I suppose?

Gen. MENOHER. Yes; you see we had about 20,000 officers and 149,000 enlisted men and cadets. Since the signing of the armistice we have discharged practically all of the enlisted men and all of the officers except about 4,000, which include the Regulars who are on duty, and by the 30th of September we must discharge all emergency officers except such as are provided for in the bill now being considered and which I believe is liable to pass, for 1,200 for the Air Service.

Mr. FREAR. But if no further legislation is had on the subject, how many men would that leave you in the Air Service?

Gen. MENOHER. Two hundred and twenty-two Regular officers, no emergency officers, and considering such enlisted men as we may have at that time, it will be about 11,000.

Mr. FREAR. So you are depending entirely upon this new legislation in order to bring the organization up to anything like what you believe to be a reasonable plan?

Gen. MENOHER. And then it will not be what we think we ought to have.

Mr. FREAR. I have run against this in the difficulties I have met in getting data. I understand that you are reaching demobilization very fast and are furnishing data to us in the best way that you can?

Gen. MENOHER. Yes, sir; we are more or less hampered in that.

Mr. FREAR. Have you any independent information here as to the number of men in the American Expeditionary Forces in the Air Service at the time of the signing of the armistice?

Gen. MENOHER. I have not that with me.

Mr. FREAR. Gen. Patrick gave us some figures, and I suppose they are accurate?

Gen. MENOHER. His figures should be accurate, because he was in immediate charge.

Mr. FREAR. And anything you would have would be such as was reported from him?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Among the answers to the request which I filed with your department some time in the month of June, I believe, is statement A, if I read it here right?

Gen. MENOHER. Yes, sir; I think that was intended for an A.

Mr. FREAR. I will ask to have that marked "Exhibit No. 100," and then in order to further identify it in connection with the present witness I will ask the reporter to put in a bracket the further identification "Gen. Menoher, Exhibit A."

Gen. MENOHER. I did not examine that statement.

Mr. FREAR. If there are any errors in tabulation that are material they can be corrected in the record. What we wish to have at this time is to have a general understanding of the exhibit.

(The statement referred to is here printed in full in the record, as follows:)

147155—19—VOL. 1—19

EXHIBIT No. 100.

Appropriations for aviation purposes, including Signal Corps, D. M. A. and B. A. P.

Appropriation.	Amount of appropriation.	Obligations to June 30, 1917.	Obligations to June 30, 1918.	Obligations to Nov. 11, 1918.	Obligations to June 30, 1919.
Alotted by:					
Board of Ordnance and Fortifications—					
Act Oct. 1, 1908.....	\$25,000.00				
Act Nov. 4, 1909.....	5,000.00				
Signal Service of the Army—					
1911, act Mar. 3, 1911.....		\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00
1912, act Mar. 3, 1911.....		25,000.00	25,000.00	25,000.00	25,000.00
1913, act Mar. 3, 1911.....		100,000.00	99,945.06	99,945.06	99,945.06
1914, act Aug. 24, 1912.....		100,000.00	99,977.29	99,977.29	99,977.29
1914, act Mar. 2, 1913.....		125,000.00	126,837.33	126,837.33	126,837.33
1914-15, act Apr. 27, 1914.....		250,000.00	249,811.39	249,811.39	249,811.39
1916, act Mar. 4, 1915.....		300,000.00	298,725.09	298,725.09	298,725.09
1916-17, act Mar. 31, 1916.....		500,000.00	495,551.32	481,540.95	481,540.95
1917, act Aug. 29, 1916.....		13,231,666.00	9,950,419.85	8,240,332.82	8,177,067.90
Aviation Seacoast Defenses, act Feb. 14, 1917.....		3,600,000.00	760,989.02	782,396.14	765,825.02
Aviation Seacoast Defenses, Insular possessions—					
Hawaii, act Feb. 14, 1917.....		600,000.00	161,322.03	245,767.03	235,228.37
Philippine Islands, act Feb. 14, 1917.....		600,000.00	21,889.64	18,453.14	18,453.14
Panama Canal, act June 12, 1917.....		500,000.00		482,000.00	480,764.67
Signal Service of the Army, 1918—					
Act May 12, 1917.....					
Act Oct. 6, 1917.....	10,800,000.00				
	40,000,000.00				
Revocation, Public, No. 275, act Feb. 25, 1919.					
	50,800,000.00				
	2,000,000.00				
Signal Service of the Army, 1917-18, act June 15, 1917.....					
Increase for aviation, Signal Corps, 1918, act July 24, 1917.....					
Aviation stations, seacoast defenses, act July 8, 1918.....					
	48,800,000.00	635,737.50	8,421,162.79	8,392,881.28	8,278,838.25
	43,450,000.00	22,479,849.53	47,267,766.00	47,169,878.46	47,002,838.40
	640,000,000.00		711,483,410.29	687,275,051.30	686,872,404.10
	8,000,000.00				1,709,591.48

Air Service, military, 1919—						
Act July 9, 1918.....	124,304,788.00					
Act Nov. 4, 1918.....	60,000,000.00					
Revocation, Public, No. 275, act Feb. 26, 1919.....	184,304,788.00					
	85,000,000.00					
Air Service production, 1919, act July 9, 1918.....	700,000,000.00					
Revocation, Public, No. 275, act Feb. 26, 1919.....	400,000,000.00					
Grand total.....		99,304,788.00				
		380,000,000.00				
		1,219,566,424.00	85,436,055.05	773,359,655.48	80,346,575.70	91,935,311.81
					380,904,571.24	289,164,487.41
					1,215,369,031.76	1,055,652,147.06

Approved:
JACOB E. FICKEL,
Lieutenant Colonel Air Service, Aeronautics,
Assistant Chief of Finance.
 WASHINGTON, D. C., June 30, 1919.

Mr. FREAR. This relates to appropriations for aviation purposes, including Signal Corps, D. M. A. and B. A. P. What is the meaning of those initials?

Gen. MENOHER. D. M. A. means Division of Military Aeronautics, which was the flying part of the Air Service, and B. A. P. means Bureau of Aircraft Production.

Mr. FREAR. They were separated; that is, flying and aircraft production were branches of the service that were separated originally?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Up to what time?

Gen. MENOHER. Up to the time of the assignment of Mr. John D. Ryan as Director of Air Service. I have forgotten the date of the order, but I think along about August.

Mr. FREAR. He came in May 20, 1918, as I recall.

Gen. MENOHER. Perhaps that is right. Afterwards his duties were enlarged, and he was placed in charge of D. M. A. and B. A. P.

Mr. FREAR. In August, 1918?

Gen. MENOHER. Yes, sir; sometime in the fall of 1918, sometime before the armistice was signed.

Mr. FREAR. Prior to that time and from the beginning of the war, or up to what period, were these departments of the aviation service separate and distinct?

Gen. MENOHER. Well, they were separate for some time, and really are in a measure separate right now. They were separate when I came, except that they were under one head. You understand that there was a department of military aeronautics in charge of Gen. Kenly; and there was a bureau, made such by executive order, which was called Bureau of Aircraft Production, at the head of which was Potter.

Mr. FREAR. Who was the predecessor of Mr. Ryan?

Gen. MENOHER. No, sir—well, yes—but in the Bureau of Aircraft Production he was succeeded later and a little while before I came by Col. Mars.

Mr. FREAR. Who was under Mr. Ryan?

Gen. MENOHER. Yes, sir; Mr. Ryan as Director of the Air Service, had these two branches. The Division of Military Aeronautics was made by executive order, and the Bureau of Aircraft Production was made such by executive order.

Mr. FREAR. Who would be in command or control of these two branches from the time of our entry into the war?

Gen. MENOHER. I can not give you a definite answer in regard to that without looking at the orders. I think Col. Westover, who is here and has been in that department from the beginning, can give you a more definite answer.

Mr. FREAR. Let me say, Gen. Menoher, by way of explanation, that this subcommittee does not assume that you have definite knowledge of all these matters. We are trying to prepare a record and get the best information we can at the present without calling those directly connected with the details, so far as we can.

Gen. MENOHER. I was not here, but am informed by Col. Westover that in the Executive order of May 20, 1918, the control of both the Bureau of Aircraft Production and the Division of Military Aeronautics, except for purely production matters, was vested at that time

in the Director of Military Aeronautics, Maj. Gen. Kenly. He retained that control until Mr. Ryan was appointed Director of Air Service in August, 1918. The order appointing Gen. Kenly to this position was May 20, 1918, being General Order 51 of the War Department.

Mr. FREAR. About what time?

Gen. MENOHER. That order was about the 20th of May. The order appointing Mr. Ryan Director of Air Service was General Order No. 81, War Department, 1918, the date of which I do not recall exactly, but some time in August.

Mr. FREAR. This exhibit, which has been marked for the purpose of identification "Exhibit No. 100" and ("General Menoher A"), purports to contain the various appropriations that were requested of you by us, the obligations to June 30, 1917, the obligations to June 30, 1918, the obligations to November 11, 1918, at the time of the signing of the armistice, and, again, to the end of the last fiscal year, June 30, 1919—that is, for the purpose of tabulation.

Gen. MENOHER. Yes, sir.

Mr. FREAR. The amount of the appropriations made by the Congress from the 1st of October, 1908, according to column 3, is \$1,219,566,424, but that omits to carry forward the sum of \$85,000,000, which was a revocation of February 25, 1919, and \$400,000,000, which was a revocation of February 25, 1919, and which, added to the amount that was actually appropriated for use, reaches \$1,704,000,000, in round figures, as appropriated by the Congress.

Gen. MENOHER. Yes, sir.

Mr. FREAR. In other words, Congress has appropriated for the Air Service \$1,704,000,000, in round numbers, and on February 25, 1919, three months after the armistice, \$485,000,000 was revoked, leaving the balance subject to use?

Gen. MENOHER. Yes, sir; I think so.

Mr. FREAR. The appropriations prior to the beginning of the war with Germany reached about a million and a half of dollars?

Gen. MENOHER. Yes, sir; I think so.

Mr. FREAR. And the remainder, \$1,704,000,000, was appropriated subsequent to our entry into the war?

Gen. MENOHER. I think so.

Mr. FREAR. You were in active service after the war began, as you have said?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And the declaration of war between Germany on the one side and England and France on the other occurred in August, 1914?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Which was a period of two and a half years, or thereabouts, prior to our entering the war?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Do you know of your own knowledge what we were doing as a Government in the Air Service during these two years and a half of war; what investigations we were making, what men we had at the front, or anything connected with the Air Service of our military establishment?

Gen. MENOHER. I know nothing about it. I was not in touch; in fact I was very much out of touch with it, being on the border.

Mr. FREAR. During that period you know from what you learned in Europe, I suppose, that all of the forces engaged prior to our entry into the war were provided with air service—even to the Belgians?

Gen. MENOHER. Yes, sir; but to what extent I can not tell you of my own knowledge.

Mr. FREAR. It was an important branch of war activities on the part of France, Great Britain, and Italy, at the time we entered the war?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And Germany at that time had begun a very active part, long prior to our entry into the war, with her air service?

Gen. MENOHER. Yes, sir.

Mr. FREAR. You gathered that from what you learned immediately after the beginning of the war?

Gen. MENOHER. Yes, sir; there is no question about that.

Mr. FREAR. You do not know what we did in making any preparations prior to the declaration of war?

Gen. MENOHER. I have no first-hand knowledge of that.

Mr. FREAR. From whom would we learn as to that? We have asked the Secretary of War and he has suggested that others could give us the information.

Gen. MENOHER. The Signal Corps, I should say.

Mr. FREAR. What officer in the Signal Corps?

Gen. MENOHER. They had at that time, as I understand, an aviation section of the Signal Corps, and the chief signal officer at the time of our entry into the war was Gen. Scriven, I think; I mean at the time of our entry into the war.

Mr. FREAR. Who followed him?

Gen. MENOHER. I think Gen. Squier, although I am not absolutely certain.

Mr. FREAR. So then Gen. Scriven or Gen. Squier ought to be able to give us information as to what preparations we were making for Air Service abroad in case of war and prior to April, 1917?

Gen. MENOHER. Yes, sir; the Signal Corps should be able to give you that information. It has been suggested to me here by Col. Westover that Captain, formerly Gen. Foulois, formerly in the Air Service, and who was in the Signal Corps at the time, can give you that information.

Mr. FREAR. Is he here now?

Gen. MENOHER. Yes, sir. I might also suggest that Gen. Mitchell would be able to give you information of some kind.

Mr. FREAR. Gen. Mitchell has a general understanding of what occurred abroad.

Gen. MENOHER. He was abroad a part of the time, in the early days of the war as observer.

Mr. FREAR. But he did not know what we were doing here in making preparations, on this side of the water.

Gen. MENOHER. No; but I venture that he kept more or less in touch with that situation, as he was in the Signal Corps.

Mr. FREAR. The reason I say that is, that I have had a talk with him about it and he did not know of matters here; he was not advised of conditions here especially.

Gen. MENOHER. I think that is probably true, but he has some information.

Mr. FREAR. The testimony of Col. Patrick, who was before us on day before yesterday, was to the effect that we had 213 De Haviland 4 planes in service at the time of the armistice, on the front, and that those were the only American-made machines on the front. Have you any information to the contrary?

Gen. MENOHER. I have not. I should accept that as correct testimony.

Mr. FREAR. Altogether we had 740 machines, including those purchased from foreign Governments, and including the 213 on the front.

Gen. MENOHER. I know that we had some American planes over there, because I saw them with my own eyes on one occasion, a great number of them.

Mr. FREAR. Col. Patrick's testimony beyond that was that he sent some De Haviland planes over the line on August 2, 1918. Yet on July 30, 1918, three days before that, Col. Clark had testified before the Thomas committee, according to the hearings, that the De Haviland 4 was defective in many particulars, and gave reasons for that testimony before the Thomas committee, and that has been placed in the record. So that three days after the testimony given by Col. Clark, who was recognized as one of the ablest men we had in the Air Service—

Gen. MENOHER (interposing). Is that Virginus C. Clark?

Mr. FREAR. Yes, sir. According to the testimony of Secretary Baker, he was one of the ablest men in the service, and three days after he gave that testimony they were sending these planes over the battle line.

Mr. LEA. He said that 1,213 planes were sent over, and 667 were assembled and sent to the front, and the others were sent to schools.

Mr. FREAR. He said there were other planes sent over but 213 were used.

Mr. LEA. Yes; actually at the front.

Mr. FREAR. Yes. Of course they were called observation planes. They were not used as bombing planes, and not used as fighting planes. If they had been used for other purposes we would certainly not have been using foreign machines, would we, to the exclusion of those machines that had been sent over?

Gen. MENOHER. No, sir.

Mr. FREAR. That is a matter of general knowledge?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The obligations to June 30, 1917, which was shortly after our entry into the war, according to column 4 of this statement, reached \$35,436,055. The obligations to June 30, 1918, when we became actively engaged in the war—and I am speaking now for aviation purposes alone—reached \$778,358,655. The obligations—and I take it this includes the expenditures which had been previously made, although it doesn't so state—the expenditures and obligations to November 11, 1918, the date of the signing of the armistice, reached \$1,215,369,031 for aviation purposes. In column No. 7 I find the obligations to June 30, 1919, for aviation purposes reached \$1,055,652,147.

Mr. MAGEE. That amount is less than the former amount.

Mr. FREAR. Yes; I was going to state that that shows a reduction of about \$160,000,000 from the obligations of November 11, 1918,

and was caused by settlements that were made, as the committee understands, and adjustments of various kinds.

Gen. MENOHER. Yes, sir.

Mr. FREAR. So that on June 30, 1919, the obligations reached to an amount of \$55,000,000 over a total of \$1,000,000,000?

Gen. MENOHER. Yes, sir.

Mr. FREAR. I wanted to ask in regard to this appropriation for aviation purposes, what did that include besides production of aviation material?

Gen. MENOHER. As I understand it included all expenses of the air service.

Mr. FREAR. In a general way, what were they?

Gen. MENOHER. Outside of the matter of production it had to do with the expenses of the flying establishment; and we had at that time, as I stated previously, 20,000 officers and 149,000 men and cadets all told; and it covered the maintenance of planes, and the travel of inspectors, and the travel of units—

Mr. FREAR (interposing). That is, here and abroad?

Gen. MENOHER. Here. But it must have included that abroad, because that was a part of the Air Service, but more or less separate you might say. As I understand it, it included all expenses of the Air Service, everything.

Mr. FREAR. That is, it included the pay of officers and men in the Air Service?

Gen. MENOHER. I think not. Col. Westover informs me that it did not include pay, subsistence, clothing, etc., they coming out of another appropriation.

Mr. FREAR. So that this amount of over \$1,000,000,000 was for production and for all the activities in providing an aviation service, including the training of men?

Gen. MENOHER. Yes, sir; the training of men, purchase of fields, etc.

Mr. FREAR. Practically everything except the pay of the officers and the men?

Gen. MENOHER. Well, the travel pay, as I understand, was all charged to the Air Service fund.

Mr. FREAR. Where would that travel be, across the ocean, or where?

Gen. MENOHER. Travel from one station to another in this country. It is a comparatively small item, and still considerable in amount.

Mr. FREAR. That is, it is a comparatively small item as compared to the total amount?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Would it include ocean transportation?

Gen. MENOHER. It would not. The quartermaster included that.

Mr. FREAR. Would it include transportation in Europe of the men?

Gen. MENOHER. No, sir.

Mr. FREAR. What was the size of the aviation force at the beginning of the war and at its conclusion, approximately? I do not care about the exact figures.

Gen. MENOHER. I will have to ask Col. Westover for that information. I am informed that at the beginning it was 47 officers and 1,500 men.

Mr. FREAR. At the beginning of the war or at the time of our entry into the war?

Gen. MENOHER. Yes; but that is only an approximation.

Mr. FREAR. What was the size of the aviation force, both here and abroad, at the time of the signing of the armistice?

Gen. MENOHER. That was, as I have given you, 20,000 officers and about 149,000 enlisted men and cadets.

Mr. FREAR. I have received a statement, which it may be proper to introduce at this point, under date of July 30, 1919, signed by Capt. Seaton, who has been bringing data to us, of the number of pilots and planes, available planes, both in this country and abroad, at various dates, June 30, 1917; June 30, 1918; and at the time of the signing of the armistice November 11, 1918, and June 30, 1919, with a reference to the authority on which this is all given. That is in response to a question sent by the committee to you to give the approximate number of American flyers able to navigate the air or awaiting orders, on June 30, 1917, and the other dates, which are furnished. That was prepared from data that you mentioned there, from the book on the subject of the war with Germany, and various authorities we had on the subject?

Gen. MENOHER. Yes, sir.

Mr. FREAR. I will ask that that exhibit be marked "Exhibit No. 101" (Gen. Menoher, Exhibit B).

Gen. MENOHER. All right.

Mr. FREAR. I have passed over Exhibit 100 (Gen. Menoher Exhibit A) until we get additional information that has been sent for.

Gen. MENOHER. All right.

Mr. FREAR. As to this Exhibit No. 101, it is short, and I will read a part of it in reply to our request for an approximate number of American flyers:

The following is a tabulation of flying officers in the United States and in the A. E. F.; also planes available at the front on above dates. Many of these were in administrative positions. These figures also include pilots, observers, and bombardiers—not all were able to operate over the line; many of the pilots were used to ferry airplanes to aerodromes.

On June 30, 1917, the number of pilots in the United States is given as 134, and the number in the American Expeditionary Forces as 5. That is based on the testimony of Col. Gorrell, who was here the other day before the committee. The total at that time, at the beginning of the war, was 139. The number of available planes—and there were none near the front, of course, at the beginning of the war—on June 30, 1918—no; I have that mixed. I have already given what was on hand at the beginning of the war. Now, on June 30, 1918, the number of pilots in the United States are given as 3,944, and the number in the American Expeditionary Forces at 2,840, total 6,784; and the number of available planes is 476. That is given on the authority of "The War with Germany, the General Staff." It is not stated what kind of planes, or where the planes were purchased, whether from foreign Governments, or where, for that matter. But on November 11, 1918, at the time of the signing of the armistice, the number of pilots in the United States is given as 7,118, and in American Expeditionary Forces at 4,307, total 11,425. The number of planes of all types and kinds is given as 2,698 at the zone of advance, American Expeditionary Forces. On June 30, 1919, the number of pilots in the United States is given as 1,239, and in

the American Expeditionary Forces 606, total 1,845. That is at a time when you are rapidly demobilizing.

Gen. MENOHER. Yes, sir.

Mr. FREAR. I will ask that the paper be inserted here.

(And the paper is printed in the record in full as follows:)

EXHIBIT 101 (GEN. MENOHER B).

Question No. 20. Approximate number of American fliers able to navigate and in active service or awaiting orders, on June 30, 1917, June 30, 1918, and November 11, 1918, and June 30, 1919.

Answer. The following is a tabulation of flying officers in the United States and American Expeditionary Forces, also planes available at the front, on above dates. Many of these officers were in administrative positions. These figures also include pilots, observers, and bombardiers. Not all were deemed fitted to operate over the lines. Many pilots were used to ferry airplanes from depots to squadron aerodromes

Date.	Pilots.		Total.	Available planes (2 of A. American Expedi- tionary Forces).
	United States.	American Expedi- tionary Forces.		
June 30, 1917.....	134	15	149	None.
June 30, 1918.....	3,944	2,840	6,784	2,698
November 11, 1918.....	7,118	4,307	11,425	2,698
June 30, 1919.....	1,239	606	1,845	

Authority:

* Col. E. S. Gorrell.

* The War with Germany (General Staff).

* Weekly progress report, Air Service, June 28, 1919.

Officers who can testify regarding training:

United States: Col. M. F. Davis (retired), Col. C. C. Culver, Col. H. C. Pratt, and Maj. W. H. Frank.

American Expeditionary Forces: Col. W. G. Kliner, Col. T. F. Dodd, and Col. J. E. Carberry.

Mr. FREAR. The authority for the forces on November 11, 1918, is as given by the General Staff in the war with Germany, and the last figures are given in the weekly progress report in the war with Germany, June 30, 1919. There were no planes on June 30, 1919, in France given in this report. Did you have any statement of that?

Gen. MENOHER. I can not tell you.

Mr. FREAR. Do you know how many planes we have over there? Have you any data in your department?

Gen. MENOHER. Yes, sir; I think so.

Mr. FREAR. I asked for it to be furnished in this form, as you will see [indicating on paper to Gen. Menoher]. On November 11, 1918, we had 2,698 of all types of planes, but on June 30, 1919, you do not show any. Will you have that information supplied?

Gen. MENOHER. Yes, sir; I will have Col. Westover make a note to get the information of the number of available planes in the American Expeditionary Forces on June 30, 1919, and furnish it to your committee.

Mr. FREAR. We had on November 11, 1918, at the signing of the armistice, according to this statement, 11,425 pilots in the United States and abroad; of whom 4,307 were in the American Expeditionary Forces. Can you give us what percentage of those pilots were qualified to fly in actual service at the fighting front?

Gen. MENOHER. A pilot means a flyer; is that what you ask?

Mr. FREAR. Yes.

Gen. MENOHER. As I understand they were all flyers. As to whether their qualifications had been completed in every instance I can not say positively, but I should say so.

Mr. FREAR. There is nothing in the authority quoted other than what you have given to the committee?

Gen. MENOHER. Not that I know of.

Mr. FREAR. The statement made by Col. Patrick before the committee was to the effect that 740 American flyers were engaged at the time of the signing of the armistice, and that they were all flying foreign machines except 213 American machines, which were De Havilland 4's. You assume that to be correct, so far as your information goes?

Gen. MENOHER. Yes, sir.

Mr. FREAR. I assume you have no independent knowledge of this beyond this data at your office, and this was furnished in response to the interrogatories of the committee?

Gen. MENOHER. That is a fact.

Mr. FREAR. I have here about 26 sheets, with possibly 30 names to the sheet on an average, of contracts of \$100,000 or more that has been negotiated by the Government in the matter of aviation expenditures; and four more sheets I have just been informed will be given to the committee. And I understand that this information will be supplied as rapidly as received. I desire to have these sheets introduced as one bundle, marked "Exhibit No. 102 (Gen. Menoher, Exhibit No. C)." These came from your department?

Gen. MENOHER. Yes, sir; I understand so.

Mr. FREAR. I believe we will introduce these sheets without any examination in regard to the items, because we are not familiar with them, and we will be better prepared to understand them after they are placed in the record, and so will you, Gen. Menoher, and we can take such action, if any action is found necessary, as we may deem proper later on.

Gen. MENOHER. All right.

(And the said sheets so introduced in evidence were copied in full in the record as follows:)

EXHIBIT NO. 102 (GEN. MENOHER, EXHIBIT C).

WAR DEPARTMENT,
OFFICE OF THE DIRECTOR OF AIR SERVICE,
Washington, August 1, 1919.

HON. JAMES A. FREAR,
Capitol, Washington, D. C.

DEAR MR. FREAR: With reference to No. 4 of your questionnaire, I hand you additional lists of contractors, consisting of sheets Nos. 18 to 21, inclusive, of formal contracts and sheet No. 3 of informal contracts.

Additional lists will follow as compiled.

Very truly, yours,

DAVID S. SEATON,
Captain, A. S. M. A., Liaison Officer.

Inclosures.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States.

[Starred items in the column headed "amount expended" include final payment.]

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
3444	Goodyear Tire & Rubber Co.	Akron, Ohio.....	Apr. 3, 1918	(¹)	\$3,729,028.00	Balloons.....	A. C. Downey, major, S. R. C.	This includes the thirtieth item listed on page A-2.
3444-1	Supplemental to 3444.....		May 10, 1918	\$28,063.00		Installation, special facilities.		
3444-A	do.....		Mar. 6, 1919	236,375.75	\$236,375.00	Settlement.....	F. D. Schnacke, captain, A. S. A. P.	Increased \$4,624.
2414	United States Tent & Awning Co.....	Chicago, Ill.....	Dec. 20, 1917	\$283,220.00	\$287,844.00	Hangers.....	A. C. Downey, major, S. C.	Increased \$4,392.00.
2413	Scott Omaha Tent & Awning Co.....	Omaha, Nebr.....	Dec. 19, 1917	\$212,988.00	\$217,380.00	do.....	do.....	
2415	Baker & Lockwood Manufacturing Co.....	Kansas City, Mo.....	Dec. 15, 1917	132,360.00	\$132,360.00	do.....	do.....	
2410	F. J. Burch Manufacturing Co.....	Pueblo, Colo.....	Dec. 20, 1917	283,720.00	\$291,012.00	do.....	do.....	Increased \$7,292.96.
2285	Baker Castor Oil Co.....	New York City.....	Dec. 17, 1917	292,800.00	131,063.00	Castor oil.....	do.....	Decreased \$160,534.96
2129	Ford Motor Co.....	Detroit, Mich.....	Nov. 22, 1917	(¹)	21,782,248.00	Engines.....	do.....	
2129-1	Supplemental to 2129.....		Nov. 24, 1917			Amendment language, e c.	do.....	
2129-2	do.....		May 17, 1918			Profit reduced from \$913.05 to \$625, amendment of estimated cost.	do.....	
2129-A	do.....		Apr. 30, 1919	1,965,319.19	\$1,965,319.00	Settlement.....	F. D. Schnacke, captain, A. S. A. P.	Increased \$737,560.84
1730	Willis Overland Co.....	Toledo, Ohio.....	Sept. 19, 1917	9,750,000.00	10,260,910.00	Motors.....	A. C. Downey, captain, S. C.	
1730-1	Supplemental to 1730.....		Dec. 14, 1917	2,500,000.00		Advanced payment.....	A. C. Downey, major, S. C.	
1730-2	do.....		May 1, 1918			Not executed.	do.....	
1730-3	do.....		July 24, 1918			Redelivery.....	do.....	
1730-4	do.....					do.....	F. D. Schnacke, first lieutenant, A. S. B.	
1881	F. Weid Manufacturing Co.....	Brooklyn, N. Y.....	Oct. 9, 1917	540,000.00	\$540,362.00	Scarving mounts.....	A. C. Downey, captain, S. C.	Increased \$392.50.
1838	General Motor Truck Co.....	Pontiac, Mich.....	Aug. 31, 1917	2,040,720.00	\$2,104,541.00	Trucks.....	do.....	Increased \$63,821.60.
1864	amb. Finlay Co.....	New York City.....	Aug. 17, 1917	(¹)	\$781,208.00	Fabric.....	do.....	
1864-1	Supplemental to 1864.....		Sept. 10, 1917			Include provision or handling 42-foot fabric.	do.....	
1864-2	do.....		Oct. 29, 1917			Same as above, 36-inch.	A. C. Downey, major S. C. U. S. A.	

1664-3	do.....	Apr. 12, 1918.			Increasing price of finish- ing fabric.	F. D. Schmacke, first lieutenant, A. S. S. R. C.
1664-4	do.....	May 8, 1918			Same as above for 42-foot	do.
1664-5	do.....	May 12, 1918			Providing for prices and new grades of linen.	do.
1664-6	do.....	May 18, 1918			do.	do.
1664-7	do.....	May 25, 1918			do.	do.
1664-8	do.....	June 4, 1918			do.	do.
D2832	Saxon Manufacturing Co.	Apr. 17, 1918		276,470.00	Metal parts	S. M. Wiley, captain
2323-A	Supplemental to D2-3632	Apr. 26, 1919		12,804.87	Settlement.	A. S. A. P.
2621	Mark Cowen & Co.....	Feb. 13, 1918		102,414.00	Flying suits.....	O. R. Ewing, first lieutenant, S. R. C.
2620	Fuller & Sullivan Co.....	Jan. 21, 1918		119,185.00	Moleskin coats and trous- ers.	do.
9297	J. T. Wilson (Inc.).....	Aug. 1, 1917		\$810,000.00	Construction supply de- pot near Richmond.	C. G. Edgar, captain S. C.
8451	J. G. White Engineering Corporation.	June 28, 1917	(1)	(1)	Construction Aero Ex- periment Station, Langley Field.	do.
7864	Walbridge Aldinger Co....	May 27, 1917	(1)	(1)	Construction, Selfridge Field.	C. G. Edgar, captain, S. C.
7865	Dayton Lumber & Man- ufacturing Co.	do.....	(1)	(1)	Construction, training camp, Dayton.	do.
50000	Mason & Hanger Co.....	Sept. 14, 1917	(1)	(1)	Construction, near Lake Charles.	C. C. Edgar, lieutenant colonel, S. C.
50218	J. G. White Engineering Co.	Dec. 3, 1917	(1)	(1)	Construction, Carlstrom Field.	do.
50360	Selden Breck Construc- tion Co.	Apr. 8, 1918	(1)	(1)	Construction, balloon school, Fort Sill.	C. G. Edgar, colonel, S. C.
50252	Hardaway Construction Co.	Feb. 7, 1918	(1)	(1)	Construction, Southern Field.	do.
2630	E. L. Long.....	Feb. 9, 1918		\$175,000.00	Planting and growing castor beans.	O. R. Ewing, first lieutenant, S. R. C.
2629	Herman B. Walker.....	Jan. 19, 1918		\$437,500.00	do.	do.
2629-1	Supplemental to 2629	July 30, 1918			do.	do.
2629-2	do.....	Aug. 13, 1918			do.	do.
2628	V. W. Helm.....	Jan. 19, 1918		\$437,500.00	Planting and growing castor beans.	F. D. Schmacke, cap- tain, A. S. A. P.
2628-1	Supplemental to 2628	July 30, 1918			Recepting beans un- shelled.	O. R. Ewing, first lieutenant, A. S. S.
2628-2	do.....	Aug. 13, 1918			Extending dated delivery.	R. C.
2613	G. G. Ware.....	Feb. 6, 1918		\$218,750.00	Castor beans.....	F. D. Schmacke, cap- tain, A. S. A. P.
2612-1	Supplemental to 2612	Aug. 12, 1918			Recepting beans un- shelled.	O. R. Ewing, first lieutenant, S. R. C.

1 Estimated.

1 Cost plus.

Paid since June 1,
1919.
Increased \$19,500.
Increased \$2,167.
Increased \$190,206.15.

Increased \$75,000.

Decreased \$148,535.14
Decreased \$431,050.34.
Reacceptance un-
shelled beans,
Extending date de-
livery.
Decreased \$175,000.

Decreased \$87,500.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
2559	D. C. Gillett.....	Miami, Fla.....	Jan. 8, 1918	\$875,000.00	\$75,712.00	Castor beans.....	A. C. Downey, major, S. C.	Decreased \$350,000.
2559-1	Supplemental to 2559.....		Aug. 13, 1918			Extending date delivery.	F. D. Schnacke, captain, A. S., A. P.	
2559-2	do.....		Aug. 22, 1918			Reaccepting beans unshelled.	O. R. Ewing, captain, A. S., A. P.	Increased \$3,168.
2411	Baker & Lookwood Manufacturing Co.	Kansas City, Mo.	Dec. 19, 1917	141,790.00	*144,988.00	Hangers.....	A. C. Downey, major, S. C.	Decreased \$6,691.10.
2412	Carnie-Gondie Manufacturing Co.	do.....	do.....	708,800.00	*702,108.00	do.....	do.....	Decreased \$902.46.
4651	Batesville Lumber & Veneer Co.	Lawrenceburg, Ind.	Sept. 13, 1918	15,500.00	*14,547.00	Walnut lumber.....	F. D. Schnacke, captain, A. S., A. P.	Increased \$126.
4651-1	Supplemental to 4651.....		Nov. 4, 1918			Regarding storage and insurance.	do.....	Decreased \$199,723.75
10165	Frank Hill Smith.....	Dayton, Ohio.....	Aug. 22, 1917	(*)	915,800.00	Construction, A. G. S. D., Fairfield.	C. G. Edgar, captain, S. C.	
4713	Postype Co.....	Cleveland, Ohio.....	Sept. 19, 1918	105,000.00	*105,126.00	Paper, bromotype.....	O. R. Ewing, captain, A. S., A. P.	
2445	L. P. Liles.....	Washington, D. C.	Dec. 22, 1917	1175,000.00	*5,276.00	Planting castor beans.....	A. C. Downey, major, S. C.	
1996	L. W. F. Engineering Co.	College Point, L. I.	Oct. 19, 1917	226,800.00	*226,800.00	Airplanes.....	A. C. Downey, captain, S. C.	
80366	F. A. Jones Construction Co.	Dallas, Tex.....	Mar. 5, 1918	(*)	111,703.00	Oil-retaining plant, Waco, Tex.	C. G. Edgar, colonel, S. C.	
1923	H. W. Johns-Manville Co.	New York City.....	Oct. 17, 1917	280,000.00	195,624.00	Tachometers.....	A. C. Downey, captain, S. C.	Terminating contract since June 1, 1919; increased \$16.62.
50354	G. J. Grant Construction Co.	St. Paul, Minn.....	Feb. 10, 1918	(*)	63,472.00	Improvements at Willy-Overland plant.	C. G. Edgar, colonel, S. C.	
3312	Dr. Horace Carlin Hall.	Laredo, Tex.....	Apr. 8, 1918	347,600.00		Castor beans.....	O. R. Ewing, first lieutenant, A. S., S. S.	Canceled.
3020	Fort Pitt Bridge Works..	Pittsburgh, Pa.....	May 28, 1918	310,500.00	304,678.00	Structural steel.....	F. D. Schnacke, first lieutenant, A. S., A. P.	
50223	Selden Brick Construction Co.	St. Louis, Mo.....	Jan. 12, 1918	196,000.00		Construction at Fort Sill, Okla.	C. G. Edgar, colonel, S. C.	Do.
4081	M. E. Gillett & Son.....	Tampa, Fla.....	May 15, 1918	686,000.00	426,022.00	Manufacturing products castor beans.	A. C. Downey, major, S. C.	Additional payments since June 1, 1919.
4081-1	Supplemental to 4081.....		Oct. 20, 1918			Covering special facilities.	O. R. Ewing, captain, A. S., A. P.	

4081-2	.....do.....	Jan. 27, 1919	.....	.....	Additional special facilities	F. D. Schnacke, captain, A. S., A. P.
4081-3	.....do.....	Apr. 24, 1919	.....	.....	.....	.....
3002	Gordon & Ferguson.....	Feb. 25, 1918	St. Paul, Minn.	\$191,637.00	To include price of canvas	O. R. Ewing, first lieutenant, S. R., C.
3365	J. H. Sleser and E. H. Fanning.....	Mar. 13, 1918	Houston, Tex.	\$87,500.00	Planting and growing castor beans	.....do.....
3726	Valle Motor Corporation.....	Apr. 10, 1918	Little Rock, Ark.	\$175,000.00	Trucks.....	A. C. Downey, captain, S. C.
3859	Valle Motor Corporation.....	Oct. 9, 1917	Moline, Ill.	\$635,000.00	.....do.....	.....do.....
3737	Hall Scott Motor Car Co.	Jan. 24, 1918	San Francisco, Calif.	\$181,401.60	Spare parts.....	A. C. Downey, major, S. C.
2667	Pittsburgh Model Engine Co.	Dec. 10, 1917	Pittsburgh, Pa.	790,980.00	.....do.....	.....do.....
2668	Spencer Kellogg & Sons (Inc.).....	Feb. 14, 1918	Buffalo, N. Y.	\$189,100.00	Castor oil.....	O. R. Ewing, first lieutenant, S. R., C.
4346	Pierce-Arrow Motor Car Co.	Sept. 9, 1918	.....do.....	(¹)	Hispano-Suiza engines.....	F. D. Schnacke, first lieutenant, A. S., S. C.
2463	Curtis Aero & Motor Corporation.....	Jan. 11, 1918	.....do.....	(¹)	Airplanes.....	A. C. Downey, major, S. C.
2463-1	Supplemental to 2463.....	Mar. 30, 1918	.....do.....	.....	Re substitution of contract 3443 to supersede contract 2463 as relates to spare parts.....	.....do.....
2463-2	.....do.....	May 1, 1918	.....do.....	.....	Spaces for testing, etc.	.....do.....
5357	Curtis Aero & Motor Corporation.....	Nov. 1, 1918	Buffalo, N. Y.	\$92,922.00	Airplanes.....	F. D. Schnacke, captain, A. S., A. P.
3771	Kaibenshue Manufacturing Co.	May 31, 1918	New York City, N. Y.	\$191,205.00	Balloons.....	A. C. Downey, major, S. C.
3771-1	Supplemental to 3771.....	Sept. 11, 1918	.....do.....	.....	Amendment of cost, etc.	O. R. Ewing, captain, A. S., A. P.
2057	John A. Roebling's Sons Co.	Nov. 2, 1917	Trenton, N. J.	\$280,000.00	Wire.....	A. C. Downey, major, S. C.
3690	Valle Motor Corporation.....	Apr. 23, 1918	Moline, Ill.	\$1,221,168.00	Truck chassis.....	O. R. Ewing, first lieutenant, S. R., C.
3492	Lyon Metallic Manufacturing Co.	Apr. 5, 1918	Aurora, Ill.	\$107,705.00	Steel cabinets.....	.....do.....
4008	Western Electric Co.	June 8, 1918	New York City, N. Y.	\$389,400.00	Wire.....	F. D. Schnacke, first lieutenant, S. R., C.
4667	Barger Manufacturing Co.	Sept. 16, 1918	Canton, Ohio	\$260,407.00	Material for hangars.....	O. R. Ewing, captain, A. S., A. P.
4766	Hayes Ionia Co.	Sept. 24, 1918	Grand Rapids, Mich.	\$470,228.00	Parts of DH-4 planes.....	F. D. Schnacke, captain, A. S., A. P.
4766-1	Supplemental to 4766.....	Nov. 1, 1918	.....do.....	.....	Change in manner of payment.....	.....do.....
4766-A	.....do.....	May 6, 1919	.....do.....	\$136,886.06	Settlement.....	S. M. Wiley, captain, A. S., A. P.

* Original contract is in files, Purchase, Storage and Traffic Division.

¹ Cost plus.

¹ Estimated.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
50221	Stone & Webster.....	Boston, Mass.....	Jan. 16, 1918	(1)	\$1,457,180.00	Construction hospital, Kelly Field.	C. G. Edgar, colonel.....	Additional payments since June 1, 1919.
50221-1	Supplemental to 50221.....		Feb. 15, 1918			Additional work, change in specification.	.....do.....	
50198	J. G. White Engineering Corporation.	New York City, N. Y.	Dec. 3, 1917	(1)	1,452,702.00	Construction, Fort Field	C. G. Edgar, colonel, S. C.	
50246	Wm. E. Hampton Co.....	Los Angeles, Calif.	Jan. 22, 1918	\$100,000.00		Construction, Rockwell Field.	.....do.....	Canceled
2737	A. C. Clark Co.....	Chicago, Ill.....	Feb. 2, 1918	\$680,000.00	680,961.00	Oxygen apparatus.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	Increased \$24,000.
2737-1	Supplemental to 2737.....		June 3, 1918			Restorage.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	
2737-3	.....do.....		Aug. 20, 1918			Change in price, increasing first 2,500 and setting price of \$120 each for second 2,500.	F. D. Schnacke, captain, A. S., A. P.	
50220	E. A. Wickham.....	St. Louis, Mo.....	Dec. 19, 1917	(1)	183,673.00	Construction at Balloon School, Fort Omaha, Nebr.	O. R. Ewing, first lieutenant, A. S., S. R. C.	
50220-1	Supplemental to 50220.....		Jan. 9, 1918			Change in specifications.	C. G. Edgar, colonel, S. C.	
2630	Denby Motor Truck Co.....	Detroit, Mich.....	Jan. 17, 1918	1,029,820.00	*1,165,581.00	Trucks.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	Increased \$135,761.77.
2630-1	Supplemental to 2630.....		Feb. 2, 1918			Readvance payment.....	A. C. Downey, major, S. C.	
2630-2	.....do.....		Mar. 12, 1918			.....do.....	S. M. Wiley, captain, A. S., A. P.	
2630-3	.....do.....		Apr. 4, 1919			Change in specifications.	O. R. Ewing, first lieutenant, A. S., S. R. C.	Increased \$3,500.
2604	Columbia Motors Co.....	Detroit, Mich.....	Feb. 8, 1918	210,125.00	*213,625.00	Trailers.....	.....do.....	Do.
2608	Rogers Bros. Co.....	Albion, Pa.....	Feb. 7, 1918	210,125.00	*213,625.00	.....do.....	.....do.....	
2608-1	Supplemental to 2608.....		May 22, 1918			Readvance payment.....	.....do.....	
2608	Page Detroit Motor Car Co.	Detroit, Mich.....	Jan. 16, 1918	1,133,270.00	1,134,948.00	Trucks.....	.....do.....	Increased \$132,270.42.
2608-1	Supplemental to 2608.....		Apr. 23, 1919			Reimbursement for change in specifications.	S. M. Wiley, captain, A. S., A. P.	

2777	Miami Trailer Co.....	Troy, Ohio.....	Feb. 7, 1918	210, 125.00	* 214, 032.00	Trailers.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	Increased \$3,927.25.
2802	Ohio Trailer Co.....	Cleveland, Ohio...	Feb. 7, 1918	419, 420.00	424, 420.00	do.....	do.....	Increased \$7,000.
2868	United Motors Co.....	Grand Rapids, Mich.	Jan. 15, 1918	572, 680.00	* 589, 700.00	Trucks.....	do.....	Increased \$17,414.60; final payment since June 1, 1919.
3641	Excelsior Motor Manufacturing & Supply Co.	Chicago, Ill.....	June 13, 1918	196, 200.00		Metal parts.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Canceled; see contract 3541-A.
3641-A	Supplemental to 3641.....	do.....	do.....	278, 494.17	297, 035.00	do.....	do.....	Decreased \$9,285.40.
3641-B	do.....	do.....	Apr. 12, 1919	7, 543.81	* 7, 543.00	Settlement.....	F. D. Schnacke, captain, A. S., A. P.	Increased \$1,940.
4335	International Radio Telegraph Co.	Brooklyn, N. Y....	July 20, 1918	171, 800.00	86, 035.00	Radio equipment.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Decreased \$71,000.
4579	Marlin Rockwell Corporation.	New York, N. Y....	Aug. 29, 1918	157, 800.00	31, 875.00	Radiators and attachments.....	F. D. Schnacke, captain, A. S., A. P.	Increased \$6,373.85.
4765	Lewis Spring & Axle Co.	Chelsea, Mich.....	Sept. 24, 1918	855, 186.25	38, 337.00	Plane spares.....	do.....	
4765-1	Supplemental to 4765.....	do.....	Feb. 18, 1919	80, 365.71	* 80, 365.00	Partial payment.....	do.....	
4765-A	do.....	do.....	May 6, 1919	48, 992.50	* 48, 992.00	Settlement.....	do.....	
3562	U. S. Rubber Co.....	New York City....	Apr. 3, 1918	(1)	178, 800.00	Balloons.....	A. C. Downey, major, S. C.	Payments since June 1, 1919.
3562-A	Supplemental to 3562.....	do.....	May 27, 1919			Order terminated, releasing Government from all further claims after outstanding approved bills have been paid.	S. M. Wiley, captain, A. S., A. P.	
2547	West Virginia Pulp & Paper Co.	New York City....	Jan. 18, 1918	* 2, 808, 000.00		Acetone and alcohol.....	A. C. Downey, major, S. C.	Canceled.
2547-A	Supplemental to 2547.....	do.....	do.....	4, 325, 703.86	* 4, 325, 703.00	Erection of acetone and methyl plant.	do.....	
2547-B	Supplemental to 2547-A.....	do.....	Nov. 26, 1918			Cancellation contract.....	do.....	
9808	Jas. L. Stewart.....	Pittsburgh, Pa....	Aug. 1, 1917	(1)	614, 223.00	Construction A. G. S. D., Harrisburg, Pa.	F. D. Schnacke, first lieutenant, A. S., S. R. C.	
1445	The Sechler & Co.....	Cincinnati, Ohio..	June 20, 1917	138, 000.00	* 138, 000.00	Tramobile airplane car-tiers.	C. T. Waring, captain, S. C. U. S. R.	
1444	Curtiss Exhibition Co....	Buffalo, N. Y.....	Nov. 10, 1917	100, 523.00	* 100, 523.00	Instruction, airplane students.	Chas. S. Wallace, lieutenant colonel, Signal Corps.	
1292	Harrisburg Pipe & Pipe Bending Co.	Harrisburg, Pa....	Apr. 30, 1917	114, 750.00	* 114, 750.00	Hydrogen cylinders.....	do.....	
1325	Stromberg-Carlson, Telephone Manufacturing Co.	Rochester, N. Y....	June 16, 1917	160, 200.00	* 159, 873.00	Service buzzers.....	C. S. Wallace, major, Signal Corps.	Decreased by adjustment voucher, \$238.91.

* Estimated.

1 Cost plus.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
1325	Supplemental contract to contract No. 1325.		Aug. 14, 1917				A. C. Downey, captain, Signal Corps.	20 per cent increase for expediting delivery.
1332	American Steel & Wire Co.	New York City...	May 22, 1917	\$210,000.00	\$210,553.00	Field wire.....	C. S. Wallace, major, Signal Corps.	Increased by adjustment voucher, \$553.11.
1333	Western Electric Co. (Inc.).	.....do.....	.....do.....	140,000.00	\$139,052.00	.....do.....	.....do.....	Decreased by adjustment voucher, \$947.04.
1326	J. G. Brill Co.....	Philadelphia, Pa.	Aug. 6, 1917	232,800.00	\$232,800.00	Wire carts and parts.....	A. C. Downey, captain, Signal Corps, United States Reserve.	
1306	B. F. Sturtevant Co.....	Boston, Mass.....	May 29, 1917	100,960.00	\$100,960.00	Engines.....	C. S. Wallace, major, Signal Corps.	
1346	California Aviation Co....	Los Angeles, Calif.	Aug. 15, 1917	243,034.75	\$241,003.00	Airplane spares.....	A. C. Downey, captain, Signal Corps.	Decreased \$2,028.96 by adjustment voucher.
1546-1	Supplemental contract to contract No. 1546.		Apr. 11, 1918				A. C. Downey, major, Signal Corps.	Advance payments.
1465	Dayton-Wright Airplane Co.	Dayton, Ohio.....	Aug. 1, 1917	2,600,000.00		Airplanes.....	A. G. Gutensohn, captain, Signal Corps.	Canceled, material not required.
1494	Wright-Martin Aircraft Corporation.	New Brunswick,	Aug. 9, 1917	325,000.00	\$235,000.00	.....do.....	A. C. Downey, captain, S. C. U. S. T.	
1497	Fisher Body Corporation.	Detroit, Mich.....	Aug. 1, 1917	2,600,000.00		.....do.....	A. G. Gutensohn, captain, Signal Corps.	Do.
1498	Standard Aero Corporation, New York.	Plainfield, N. J.....	.....do.....	1,612,800.00	\$287,347.00	.....do.....	.....do.....	Balance, \$1,325,452.80 canceled; material not required.
1509	.....do.....	.....do.....	July 26, 1917	203,541.50	\$203,523.00	Planes and equipment..	.....do.....	Decreased by adjustment voucher, \$18.50.
1510	The Burgess Co.....	Marblehead, Mass.	Oct. 30, 1917	159,509.50	\$159,503.00	Airplanes and motors..	A. C. Downey, major, Signal Corps.	Increased by adjustment voucher, \$6.50.
1512	Hall Scott Motor Car Co.	New York City...	July 30, 1917	1,774,800.00	\$1,776,752.00	Engines.....	A. G. Gutensohn, captain, Signal Corps.	To provide for 10 per cent increase in wages.
1512-1	Supplemental contract to contract No. 1512.	.....do.....	Dec. 10, 1918				O. R. Ewing, captain..	

1457	The White Co.....	Washington, D. C.	June 22, 1917	211,400.00	*211,400.00	Trucks for radio tractors.	C. S. Wallace, lieutenant colonel, Signal Corps.
1464	Wright-Martin Co.....	New York City...	Aug. 9, 1917	325,000.00		Airplanes.	A. C. Downey, captain, S. C. U. S. T.
1490	Western Electric Co.....	do.....	July 23, 1917	175,000.00		Field wire.	A. G. Gutensohn, captain, Signal Corps.
1491	American Steel & Wire Co.	Washington, D. C.	July 19, 1917	126,783.90		Buzzer and field wire.	do.....
1498	L. W. F. Engineering Co.	College Point, Long Island, N. Y.	July 17, 1917	453,600.00		Reconnaissance airplanes.	do.....
1506	Curtiss Aeroplane Co.....	Buffalo, N. Y.	July 20, 1917	1,908,000.00		Airplanes and engines.	do.....
1478	General Vehicle Co.....	Long Island City, N. Y.	July 16, 1917	273,000.00		Engines.	do.....
1516	Nordyke & Marmon Co.	Indianapolis, Ind.	July 31, 1917	2,366,000.00		Engines.	do.....
1516-1	Supplemental contract to contract No. 1516.		Dec. 18, 1917				A. C. Downey, major.
1516-2	do.....		Jan. 15, 1918				do.....
1710	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Sept. 19, 1917	6,650,000.00		Airplanes.	A. C. Downey, captain, Signal Corps.
1710-1	Supplemental contract to contract No. 1710.		Oct. 24, 1917				do.....
1777	Thomas-Morse Aircraft Corporation.	Ithaca, N. Y.	Sept. 25, 1917	260,000.00		Airplanes.	A. C. Downey, Signal Corps.
1545	Western Electric Co.....	New York, N. Y.	Aug. 15, 1917	128,640.00		Wire.	A. C. Downey, Signal Corps, United States Reserves.
1550	Fowler Airplane Co.....	San Francisco, Calif.	Aug. 14, 1917	325,000.00		Airplanes.	do.....
1568	Western Electric Co.....	New York, N. Y.	Aug. 18, 1917	128,000.00		Switchboards.	do.....
1560	Thomas-Morse Aircraft Corporation.	Ithaca, N. Y.	Aug. 20, 1917	108,790.08		Motors.	do.....
9519	Stone & Webster.....	Boston, Mass.	July 16, 1917	(1)		Construction camp, San Antonio, Tex.	C. G. Edgar, captain, Signal Corps.
1572	Bausch & Lomb.....	Rochester, N. Y.	Aug. 18, 1917	665,000.00		Field glasses.	L. M. Evans, captain, Signal Corps, United States Reserves.
1581	Western Electric Co.....	New York, N. Y.	Aug. 28, 1917	133,653.75		Cable.	A. C. Downey, captain, Signal Corps, United States Reserves.

Cost plus.

Canceled, material not required.
Increased by adjustment voucher, \$366.85.
Increased by adjustment voucher, \$583.59.

Decreased \$1,888.00 by adjustment voucher.
Decreased by adjustment voucher, \$232,080.

Advance payment of \$500,000.
Storing and installing magnetos on engines manufactured.
Decreased \$52,800.60.

Providing advance payments.
Canceled, material not required.
Decreased \$6,444.22.

Canceled, material not required.

Do.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
1585	Stromberg-Carlson Telephone Manufacturing Co.	Rochester, N. Y.	Aug. 27, 1917	\$213,750.00	\$213,750.00	Buzzers.	A. C. Downey, captain, Signal Corps, United States Reserve.	
1587	Strauss & Buergelisch	New York, N. Y.	Aug. 28, 1917	165,000.00	* 36,812.00	Goggles.		Decreased \$128,107.50; balance of material not received. Settlement contract.
1587-1	Supplemental contract to contract No. 1587.		Oct. 15, 1918				F. G. Schnecko, captain, U. S. A. P.	
1601	Western Electric Co.	New York, N. Y.	Aug. 27, 1918	129,282.74	*129,282.00	Telephone sets.	A. C. Downey, captain, Signal Corps, United States Reserve.	
1618	Hiseg Wolf Machine Co.	Cincinnati, Ohio.	Nov. 30, 1917	207,250.00	*199,250.00	Drills and grinders.	A. C. Downey, major, Signal Corps.	Decreased, \$8,000.
1620	Carnegie-Gaudie Manufacturing Co.	Kansas City, Mo.	Aug. 29, 1917	112,151.00	*112,151.00	Hangars.	A. C. Downey, captain, Signal Corps, United States Reserve.	
10186	Boomer Crain & Howe and Jaues Bros.	Lake Charles, La.	Sept. 1, 1917	1,700,000.00		Construction at Lake Charles, La.	C. G. Edger, captain, Signal Corps.	Superseded by No. 50000.
1752	H. D. Lee Mercantile Co.	Trenton, N. J.	Sept. 25, 1917	135,000.00	*135,000.00	Overalls.	A. C. Downey, captain, Signal Corps, United States Reserve.	
1666	Thomas-Morse Aircraft Corporation.	Ithaca, N. Y.	Sept. 11, 1917	285,000.00		Airplanes.	A. C. Downey, captain, Signal Corps.	Canceled, material not received.
1699	L. W. F. Engineering Co.	College Point, Long Island	Sept. 14, 1917	226,800.00	*226,800.00	do.	do.	
1800	Liberty Iron Works.	Sacramento, Calif.	Sept. 27, 1917	1,425,000.00		do.	do.	Canceled, superseded by 1800-A.
1800-A	do.	do.	Mar. 6, 1918	475,000.00	*475,000.00	do.	do.	
1812	Curtis Aero & Motor Corporation.	Buffalo, N. Y.	Sept. 19, 1917	(1)	*250,000.00	do.	A. C. Downey, major, Signal Corps.	
1880	West Coast Lumbermen's Association.	Seattle, Wash.	Oct. 9, 1917	165,000.00		Flr.	A. C. Downey, captain, Signal Corps.	Canceled, material not received.
1913	Harrisburg Pipe & Pipe Bending Co.	Harrisburg, Pa.	Oct. 15, 1917	459,000.00	*459,000.00	Hydrogen cylinders.	do.	
1916	Wm. Whitman Co.	New York City	Oct. 11, 1917	115,000.00	*114,982.00	Airplane cotton fabric.	do.	Decreased \$17.22.
3444	Good year Tire & Rubber Co.	Akron, Ohio.	Oct. 12, 1917	372,500.00	*372,500.00	Balloons.	do.	

1933	Curtiss Airplane Corporation.	Buffalo, N. Y.	Feb. 1, 1918	114,000.00	*45,804.00	Airplane parts.....	O. R. Ewing, first lieutenant A. S., S. R. C.	Decreased \$68,195.80.
1941	United States Aircraft Corporation.	Redwood City, Calif.	Oct. 13, 1917	475,000.00		Airplanes.....	A. C. Downey, captain, Signal Corps.	Canceled, material not required.
1939	Grays Harbor Lumber Co.	Hoquiam, Wash. .	Oct. 31, 1917	\$126,000.00		Spruce.....	A. C. Downey, major, Signal Corps.	Canceled, taken over by Spruce Products Corporation.
1960	Columbia Bow & Lumber Co.	South Bend, Wash.	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1961	Bandon Mills Co.	Bandon, Oreg. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1962	Bloedel Donovan Lumber Co.	Seattle, Wash. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1963	Grays Harbor Lumber Co.	Coeppopolis, Wash.	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1964	Brew Manufacturing Co.	Puyallup, Wash. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1965	Bay City Lumber Co.	Aberdeen, Wash. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1967	Silver Spruce Co.	Bay City, Oreg.	Oct. 25, 1917	\$62,000.00		.....do.....	.....do.....	Do.
1968	Nehalem Sawmill & Box Co.	Nehalem, Oreg.	Oct. 31, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1969	Anderson & Middleton.	Aberdeen, Wash. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1970	Northwestern Lumber Co.	Hoquiam, Wash.	Nov. 1, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1971	Copalis Lumber Co.	Carlisle, Wash.	Oct. 31, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1972	Wheeler Lumber Co.	Wheeler, Oreg.	Oct. 24, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1974	Eureka Cedar Lumber & Shingle Co.	Hoquiam, Wash.	Nov. 1, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1975	A. G. Beale Lumber Co.	Tillamook, Oreg. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1976	Moore Mill & Lumber Co.	Bandon, Oreg.	Oct. 31, 1917	\$126,000.00		.....do.....	.....do.....	Do.
1977	A. F. Coates Lumber Co.	Tillamook, Oreg. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1978	E. K. Bishop Lumber Co.	Montesano, Wash. ....	.....do.....	\$126,000.00		.....do.....	.....do.....	Do.
1979	Aberdeen Lumber & Shingle Co.	Aberdeen, Wash.	Oct. 23, 1917	210,000.00		.....do.....	A. C. Downey, captain, Signal Corps.	Do.
1981	Proudy Lumber & Box Co.	Seattle, Oreg. ....	.....do.....	168,000.00		.....do.....	.....do.....	Do.
1982	Sitka Spruce Co.	Coquille, Oreg. ....	.....do.....	252,000.00		.....do.....	A. C. Downey, major, Signal Corps.	Do.
2016	Engel Aircraft Co.	Niles, Ohio.	Oct. 28, 1917	885,077.50		.....do.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Increased \$887.
2016-1 2724	Supplemental to cont. 2016 Eastman Kodak Co.	Rochester, N. Y.	Feb. 26, 1918 Mar. 16, 1918	\$332,000.00		Advanced payments. Unit sight.....	O. H. Ewing, first lieutenant, A. S., S. R. C.	
2726	L. W. F. Engineering Corporation.	College Point, L. I.	Jan. 26, 1918	\$309,000.00		Airplanes.....	R. C. Schnacke, first lieutenant, A. S., S. R. C.	Increased \$7,066.
2853	Electric Metallurgical Sales Corporation.	New York City.	Feb. 14, 1918	120,750.00		Ferrosilicon.....	A. C. Downey major Signal Corps.	
9295	Clough-Bourne Corporation.	.....do.....	July 18, 1917	(1)	2,230,407.00	Construction material.....		

* Estimated.

1 Cost plus.

WAR EXPENDITURES.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
2015	Aero Instruction Corps...	New York City...	Feb. 15, 1918	\$325,000.00	.....	Aneroid barometers.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Canceled, material not required.
2051	Inter Register Co.....	Chicago, Ill.....	Feb. 16, 1918	112,000.00	*\$111,700.00	Wind-vane sights.....	.....do.....	Decreased \$240.
1859	Curtiss Aeroplane Co.....	Buffalo, N. Y.....	Oct. 17, 1917	824,545.00	*\$21,000.00	Spares.....	A. C. Downey, captain, Signal Corps.	Decreased \$403,545.
2428	A. C. Clark Co.....	Chicago, Ill.....	Dec. 29, 1919	305,000.00	.....	Oxygen apparatus.....	A. C. Downey, major, Signal Corps.	Canceled, material not required.
2448	Sturtevant Airplane Co.....	Jamaica Plain, Mass.	Feb. 13, 1918	263,917.50	*\$263,917.00	Spares.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	.....
2440	.....do.....	.....do.....	Jan. 24, 1918	150,975.00	*\$165,975.00	.....do.....	A. C. Downey, major, Signal Corps.	Increased \$15,000.
2473	Engel Aircraft Co.....	Niles, Ohio.....	Jan. 17, 1918	173,585.00	*\$173,478.00	.....do.....	.....do.....	Decreased \$87.
2468	Rubay Co.....	Cleveland, Ohio.....	Dec. 29, 1917	173,798.00	*\$173,641.00	.....do.....	.....do.....	Decreased \$36.99.
2471	.....do.....	Niles, Ohio.....	Jan. 23, 1918	164,128.00	*\$164,472.00	.....do.....	.....do.....	Increased \$344.50.
2472	Engel Aircraft Co.....	Niles, Ohio.....	Feb. 14, 1918	163,965.00	*\$164,270.00	.....do.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Increased \$305.50.
1843	Flottorp Manufacturing Co.	Grand Rapids, Mich.	Oct. 6, 1917	336,000.00	*\$229,068	Propellers.....	A. C. Downey, captain, Signal Corps.	Decreased \$106,932; balance of material purchased.
3477	J. G. White Engineering Corporation.	New York City...	Mar. 25, 1918	()	183,093.00	Construction supplies.....	A. C. Downey, major, Signal Corps.	Payments made since June 1, 1919.
1901	Leavitt Thompson Co. (Inc.).	Philadelphia, Pa...	Dec. 11, 1917	\$200,000.00	83,438.00	Lumber.....	A. C. Downey, captain, Signal Corps, United States Reserves.	Estimate increased \$60,000.
1901-1	Supplemental contract to Contract No. 1901.	.....do.....	.....do.....	.....	.....	.....	A. C. Downey, major, Signal Corps.	Providing advanced payments.
1901-2	.....do.....	.....do.....	Oct. 11, 1918	.....	.....	.....	F. D. Schnacke, captain, A. S., A. P.	Providing payment for storing lumber.
50312	Frank Hill Smith.....	Dayton, Ohio.....	Mar. 4, 1918	()	248,295.00	Construction.....	C. G. Edgess, colonel, O. R. Engineering	Estimate increased \$18,970.37.
3416	Louis F. Shoemaker.....	Washington, D. C.	Apr. 4, 1918	\$386,597.00	*\$405,567.00	Structural steel.....	.....do.....	Estimate increased \$22,532.04.
3421	McClintic Marshall Co.....	.....do.....	Apr. 2, 1918	\$447,120.00	*\$469,652.00	.....do.....	.....do.....	Estimate increased \$21,457.50.
3438	Blaw-Knox Co.....	Pittsburgh, Pa.....	.....do.....	\$437,400.00	*\$458,857.00	.....do.....	.....do.....	Estimate increased \$21,457.50.
3462	Carnie-Opdiele Manufacturing Co.	Kansas City, Mo.....	.....do.....	143,325.00	*\$155,420.00	Curtains for hangars.....	.....do.....	Increased \$12,095.

[illegible]

Excluded:

善美

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—

Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
3199	Western Electric Co.	New York City	Mar. 15, 1918	\$120, 110. 00	*\$114, 378. 00	Telephone switchboards and telephones.	O. R. Ewing, first lieutenant, A. S. R. C.	Decreased \$5,732.10.
3029	Kellog Switchboard & Sup. Co.	Chicago, Ill.	Mar. 5, 1918	131, 200. 00	*\$131, 960. 00	Buzzer telephones.	do	Increased \$760.
4545	Walden Worcester (Inc.) ..	Worcester, Mass. ..	Aug. 23, 1918	177, 347. 20	97, 754. 00	Clevis parts.	F. D. Schnacke, captain, A. S. A. P.	Decreased \$48,261.55.
3822	General Electric Co.	Washington, D. C. ..	May 8, 1919	142, 150. 00	3, 954. 00	Gun yokes and trigger controls.	do	Closing contracts being negotiated.
3870	American Propeller Co.	Baltimore, Md.	May 16, 1918	300, 000. 00	13, 251. 00	Propellers.	do	Increased \$7,751.
4570	Liberty Iron Works.	Sacramento, Calif.	Sept. 26, 1918	400, 000. 00	*400, 350. 00	Airplanes.	F. D. Schnacke, captain, A. S. A. P.	Increased \$356.
4468	Standard Aeroplane Corporation of New Jersey.	Elizabeth, N. J.	Aug. 20, 1919	104, 250. 00	*104, 250. 00	Planes.	do	
4619	Willys-Overland Co.	Toledo, Ohio.	Sept. 9, 1918	2, 625, 000. 00	*2, 625, 000. 00	1,500 Curtiss O-5 engines.	O. R. Ewing, captain, A. S. A. P.	
4407	The Russ Co.	Cleveland, Ohio.	Aug. 2, 1918	166, 750. 00	*156, 750. 00	Carrying chests, 9,500.	F. D. Schnacke, captain, A. S. A. P.	
3583	Wilson Foundry & Machine Co.	Pontiac, Mich.	Apr. 11, 1918	210, 000. 00	*210, 000. 00	Cylinders.	do	
3517	Winton Co.	Cleveland, Ohio.	Apr. 8, 1918	120, 750. 00	*120, 750. 00	Motor generator sets and charging panels.	O. R. Ewing, first lieutenant, A. S. R. C.	Decreased \$387,500.
3518	do	do	do	120, 750. 00	*120, 750. 00	do	do	
3750	Western Electric Co.	New York City	Apr. 29, 1918	1, 625, 000. 00	*757, 500. 00	Radio telegraph receiving sets.	do	Increased \$0.08.
3752	Geo. R. Carter Co.	Connerville, Ind.	May 2, 1918	108, 723. 99	*108, 724. 00	Bolts and cases.	F. D. Schnacke, first lieutenant, A. S. R. C.	Increased \$5,346.
3894	Eastman Kodak Co.	Rochester, N. Y.	June 15, 1918	240, 000. 00	*294, 654. 00	Cameras.	do	
2237	Wm. Whitney Co.	New York City	Nov. 20, 1917	240, 000. 00	*235, 343. 00	Airplane fabric.	A. C. Downey, major, Signal Corps.	Decreased \$4,654.30.
2239	Pennamah Mills.	do	Nov. 19, 1917	120, 000. 00	*118, 945. 00	do	do	Decreased \$1,054.09.
2404	Taylor Instrument Co.	Rochester, N. Y.	Dec. 19, 1917	187, 500. 00	*162, 500. 00	Anemoids.	do	Decreased \$25,000.
2440	Lewis Thompson & Co.	Philadelphia, Pa.	Nov. 23, 1917	94, 000. 00	*91, 332. 00	Mahogany.	do	Decreased \$2,667.76.
1299	Curtiss Aeroplane Co.	Buffalo, N. Y.	Apr. 30, 1917	167, 055. 00	*167, 559. 00	Engines and spare parts.	Chas. S. Wallace, major, Signal Corps.	Decreased \$9,466.77.
2373	Wolverine Brass Works.	Grand Rapids, Mich.	Dec. 12, 1917	400, 000. 00	*450, 000. 00	Mounts.	A. C. Downey, major, Signal Corps.	
2401	St. Louis Aircraft Corporation.	St. Louis, Mo.	Dec. 15, 1917	2, 137, 500. 00	*2, 137, 500. 00	Airplanes.	do	
4663	Western Electric Co.	New York City	June 17, 1918	126, 000. 00	*\$119, 880. 00	Radio telegraph receiving sets.	F. D. Schnacke, first lieutenant, A. S. R. C.	Decreased \$120.

4134	.....do.....	May 22, 1918	350,000.00	*350,000.00	Field telephones.....	.....do.....	Canceled; material not received.
4683	Kunhardt & Co.....	Sept. 16, 1918	262,500.00	.....	Castor beans 50M to 75M.	O. R. Ewing, A. S. R.	
5313	General Electric Co.....	Nov. 12, 1918	206,330.00	.....	Lewis gun yokes, etc.....	F. J. Schnacke, captain, A. S. A. P.	Increased \$23,398.54.
3780	Delta Electric Co.....	May 2, 1918	175,055.00	*201,453.00	Projectors.....	O. R. Ewing, first lieutenant, A. S. S. R. C.	D. creased \$51,452.10.
3585	Hall-Scott Motor Car Co..	Apr. 12, 1918	102,970.00	*51,517.00	Assemblies, etc.....	F. J. Schnacke, first lieutenant, A. S. S. R. C.	
3754	Curtiss Aero & Motor Corporation.	July 7, 1918	62,110.00	46,300.00	Spare parts.....	.....do.....	
3087	Stromberg-Carlson Telephone Manufacturing Co.	Mar. 5, 1918	41,212.50	*41,212.00	Switch boards, units, and frames.....	O. R. Ewing, first lieutenant, R. C.	
2551	Thomas-Morse Aircraft Corporation.	Jan. 11, 1918	2,000,100.00	*1,792,165.00	Airplanes.....	A. C. I owney, major..	Decreased \$207,985.
4501	Parsons Pulp & Lumber Co.	July 26, 1918	480,000.00	75,000.00	Spruce.....	F. J. Schnacke, first lieutenant, S. S. R. C.	Extending date of contract.
4501-1	Supplemental to 4501.	Sept. 19, 1918	.....	.....	.....	.....do.....	Advance payment.
4501-2	.....do.....	Aug. 24, 1918	.....	.....	Electric equipment.....	O. R. Ewing, first lieutenant, S. R. C.	
3026	Western Electric Co.....	Mar. 6, 1918	116,944.00	*116,944.00	.....	A. S.	
2852	Edison Storage Battery Co.	Apr. 13, 1918	206,100.00	90,352.00	Storage batteries.....	.....do.....	
2852	.....do.....	Apr. 16, 1918	214,080.00	48,068.00	.....do.....	.....do.....	
2857	.....do.....	Apr. 13, 1918	200,000.00	135,510.00	.....do.....	.....do.....	
1939	Curtiss Aeroplane Co.....	Oct. 17, 1917	824,545.00	*21,000.00	Spare parts.....	A. C. I owney, captain	Decreased \$308,545
3320	International Radio Telegraph Co.	May 21, 1918	140,000.00	108,708.00	Transmitters.....	F. J. Schnacke, first lieutenant, A. S. S. R. C.	Decreased \$9,475.
4331	Jas. Cunningham Son & Co.	Aug. 2, 1918	169,500.00	153,000.00	Windlasses.....	.....do.....	Decreased \$16,500.
4698	International Duplex Coat Co.	Sept. 16, 1918	197,500.00	*197,307.00	Flying suits.....	O. R. Ewing, captain, A. S. A. P.	Decreased \$192.25.
4799	H. D. Lee Merchantile Co.	Sept. 27, 1918	156,000.00	156,000.00	Mechanic's suits.....	F. J. Schnacke, captain, A. S. A. P.	
3753	Goehler Mill Casting Co....	June 4, 1918	213,500.00	72,335.00	Spares.....	F. J. Schnacke, first lieutenant, A. S. S. R. C.	Increased \$6,280.
2594	Thomas Morse Airplane Corporation.	Apr. 1, 1918	(*)	*216,035.00	.....do.....	A. C. I owney, major, Signal Corps.	
2594-1	Supplemental to 2594.....	Nov. 1, 1918	216,035.40	.....	Changing from cost-plus to fixed price.	F. J. Schnacke, captain, Signal Corps.	

* Estimated.

* Cost plus.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
2633	Improved Equipment Co.	New York City...	Jan. 4, 1919	\$150,000.00	\$99,782.00	Silicon hydrogen generators.	A. C. Downey, major, Signal Corps.	Increased \$41.62.
2633-1	Supplemental to 2633.		do.			Including orders 9203 and 20226.	do.	Decreased \$5,689.
1846	American Propeller & Manufacturing Co.	Baltimore, Md.	Oct. 6, 1918	175,300.00	74,504.00	Propellers.	do.	Decreased \$21,000.
2179	Curtiss Aeroplane & Motor Corporation.	Buffalo, N. Y.	Nov. 15, 1917	831,435.00	640,538.00	Spares.	do.	This order followed 20886, which was canceled. Payments since June 1, 1919, \$4,950.
2709	United States Aircraft Corporation.	Redwood City, Calif.	Feb. 6, 1918	326,242.00	*226,170.00	Planes and spares.	do.	Decreased \$71.90.
2554	Pierce Manufacturing Co.	New Bedford, Mass.	Jan. 14, 1918	172,500.00	*228,468.00	Airplane fabric.	do.	Increased \$55,988.74.
2239	Precision Instruments Co.	Detroit, Mich.	Dec. 1, 1917	140,000.00	*103,862.00	Air speed indicators.	do.	Decreased \$19,392.75.
2239-1	Supplemental to 2239.		Apr. 24, 1918			Raw materials.	do.	Advance payment.
2239-A	do.		Mar. 27, 1919		*16,745.00		S. M. Wiley, captain, A. S., A. P.	Termination contract.
2238	Pierce Manufacturing Co.	New Bedford, Mass.	Nov. 20, 1917	120,000.00	131,016.00	Airplane fabric.	A. C. Downey, major, Signal Corps.	Completed since June 1, 1919.
1380	Western Electric Co.	New York City...	Aug. 28, 1917	137,000.00	*140,280.00	Telephone switchboards.	A. C. Downey, captain, S. C., U. S. R.	Increased \$3,250.
1911	Wright-Martin Aircraft Corporation.	New Brunswick, N. J.	Sept. 28, 1917	2,500,000.00	330,720.00	Spares.	do.	Decreased \$1,675,000.
1814	Western Electric Co.	New York City...	July 30, 1917	198,400.00	*196,400.00	Outpost wire.	A. G. Gutensohn, captain, Signal Corps.	
1650	do.	do.	May 9, 1918	75,000.00	*98,880.00	Electrical equipment.	O. R. Fwing, first lieutenant, A. S., S. R. C.	Decreased \$6,149.49.
5152	New Granada Corporation of Delaware.	do.	Oct. 26, 1918	2,264,000.00		Castor beans.	A. S., A. P.	Canceled, material not required.
4694	Commercial Bank of Spanish merica.	do.	Sept. 17, 1918	1,330,000.00		do.	do.	Do.
4005	The Silver Co.	Bethlehem, Pa.	June 14, 1918	560,000.00	350,000.00	Spark plugs.	F. D. Schnacke, first lieutenant, A. S., S.	Decreased \$66.
4105	Connecticut Aircraft Co.	New Haven, Conn.	June 17, 1918	170,000.00	*199,984.00	Balloons.	do.	Amending terms of payment.
4105-1	Supplemental to 4105.		Aug. 5, 1918			Engines and spares.	do.	Increased \$16,823.77.
3600	Hall-Scott Motor Car Co.	San Francisco, Calif.	Apr. 12, 1918	251,326.00	*264,156.00		do.	

3350	Lewis & Vought Corporation.	Long Island City, N. Y.	May 8, 1918	100,000.00	*100,000.00	Services.....	.....do.....	Canoeled; material not required.
4330	United Fruit Co.....	Boston, Mass.....	July 28, 1918	131,454.78		Castor beans.....	.....do.....	Do.
5342	Waltham Clock Co.....	Waltham, Mass.....	Nov. 5, 1918	423,000.00		Airplane clocks.....	F. D. Schnacke, captain, A. S., A. P.	Decreased \$367,646.58.
5357	Van Sicken Co.....	Elgin, Ill.....	Nov. 12, 1918	372,600.00		Altimeters.....	.....do.....	Termination contract.
5357-A	Supplemental to 5357.....		Apr. 26, 1919		4,843.00		B. M. Wiley, captain, A. S., A. P.	Decreased \$64,316.77.
3365	Eastman Kodak Co.....	Rochester, N. Y.....	Nov. 5, 1918	140,000.00		Cameras.....	F. D. Schnacke, captain, A. S., A. P.	Canoeled; material not required.
5360	Foxboro Co.....	Foxboro, Mass.....	Nov. 13, 1918	350,000.00		Air speed indicators.....	.....do.....	Cancellation of contract.
5360-A	Supplemental to 5360.....		May 20, 1919				S. M. Wiley, captain, A. S., A. P.	Cancelled; material not required.
2884	J. A. Roebblings Sons Co.....	Trenton, N. J.....	Feb. 13, 1918	\$ 177,675.00	102,183.00	Wire.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	\$15,415.47 paid since June 1, 1919.
2892	.....do.....	.....do.....	Feb. 12, 1918	\$120,050.00	\$138,716.00	.....do.....	.....do.....	Decreased \$333.54.
2846	Western Electric Co.....	New York City.....	.....do.....	\$403,300.00	286,597.00	.....do.....	.....do.....	\$15,394.40 paid since June 1, 1919.
2845	J. A. Roebblings Sons Co.....	Trenton, N. J.....	Feb. 13, 1918	\$ 206,575.00	139,448.00	.....do.....	.....do.....	
4130	Gundlach Optical Co.....	Rochester, N. Y.....	June 22, 1918	\$85,000.00		Field glasses.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Cancelled; superseded by 2841-A.
2841	American Steel & Wire Co.....	New York City.....	Feb. 12, 1918	\$300,000.00		Wire.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	Increased \$6,895.77.
2841-A	United States Steel Products Co.....	.....do.....	May 4, 1918	\$300,000.00	*315,895.00	.....do.....	.....do.....	Increased \$114,261.
1837	Kelly-Springfield Motor Co.....	Detroit, Mich.....	Sept. 4, 1917	3,797,500.00	*3,911,761.00	Chassis.....	A. C. Downey, captain, S. C. U. S. R.	Decreased \$105,368.
4038	Curtiss Aero & Motor Corporation.....	Buffalo, N. Y.....	Aug. 12, 1918	\$446,500.00	256,980.00	Airplanes.....	F. D. Schnacke, captain, A. S., A. P.	Decreased \$376,768.57.
4033	.....do.....	.....do.....	Jan. 17, 1919	850,000.00	347,808.00	Spares.....	.....do.....	Cancelled; material not required.
4553	Boech Magneto Co.....	New York City.....	Aug. 23, 1918	112,500.00		Magnets and switches.....	.....do.....	
4832	Wilson Foundry & Machine Co.....	Pontiac, Mich.....	Sept. 28, 1918	142,500.00	*142,500.00	Cylinders.....	.....do.....	Do.
4530	Spilldorf Electrical Co.....	Newark, N. J.....	Aug. 27, 1918	302,237.00		Magneto parts.....	.....do.....	Decreased \$2,433,000.
4018	Packard Motor Car Co.....	Detroit, Mich.....	Aug. 20, 1918	(*)	557,885.00	Battle planes.....	F. D. Schnacke, first lieutenant, A. S., S. R. C.	Additional payments since June 1, 1919.
4037	Curtiss Aero & Motor Corporation.....	Buffalo, N. Y.....	Aug. 1, 1918	(*)	278,132.00	.....do.....	.....do.....	Payments since June 1, 1919.
4037-A	Supplemental to 4037.....		Nov. 1, 1918	\$ 3,300,000.00		Changing cost plus to flat prices.....	.....do.....	Decreased \$2,262.
4039	Curtiss Aero & Motor Corporation.....	Buffalo, N. Y.....	July 30, 1918	(*)		Planes.....	.....do.....	
3864	Edison Storage Battery Co.....	Orange, N. J.....	Aug. 27, 1918	105,014.00	63,132.00	Batteries.....	.....do.....	
1814	Western Electric Co.....	New York City.....	May 24, 1918	(*)	*240,138.00	Telephone material.....	.....do.....	* Indefinite.

! Original contract in files P. S. and T.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
3904	Standard Aero Corporation of New York.	Elizabeth, N. J....	Nov. 7, 1918	(1)	\$238,644.00	Planes and spares.	O. R. E. Ing, captain, A. S., A. P.	Payments since June 1, 1919.
1485	Kessler Motor Co....	Detroit, Mich....	July 23, 1917	\$125,000.00		Engines.	A. G. Gutensohn, captain, Signal Corps.	Canceled, material not required.
1485-1	Supplemental to 1485....		Apr. 1, 1918	125,000.00		do.	A. C. Downey, major, S. R. C.	Covering advance payments.
2027	Western Electric Co....	New York City....	Oct. 25, 1917	252,000.00	\$252,000.00	Telephones.	do.	
2538	Bressee Aircraft Corporation.	Farmingdale, Long Island.	Jan. 23, 1918	(1)	70,724.00	Engine spares.	A. C. Downey, major, Signal Corps.	
2538-1	Supplemental to 2538....		Mar. 12, 1918	(1)		Reducing 50 per cent and correcting clerical error.	F. D. Schenck, first lieutenant, A. S., S. R. C.	
1896	The Rubey Co....	Cleveland, Ohio....	Nov. 3, 1917	233,047.50	\$240,805.00	Spares.	A. C. Downey, major, Signal Corps.	Increased \$7,758.
1841	Thomas Morse Aircraft Corporation.	Ithaca, N. Y....	Oct. 6, 1917	126,000.00	\$126,000.00	Engines.	A. C. Downey, captain, S. R. C.	
1911	Tindel Norris Co....	North Eddystone, Pa.	Oct. 12, 1917	300,000.00	\$300,600.00	Cylinders.	do.	Increased \$600.
1827	Thomas Morse Aircraft Corporation.	Ithaca, N. Y....	Oct. 5, 1917	540,000.00	\$780,000.00	Airplanes.	do.	Increased \$250,000.
2365	Bressee Aircraft Co....	Farmingdale, Long Island.	Dec. 6, 1917	(1)	591,325.00	do.	do.	
1573	Crown Optical Co....	Rochester, N. Y....	Aug. 21, 1917	750,000.00	127,425.00	Field glasses.	do.	
1640	Lybrand Bros., Ross & Montgomery.	New York City....	Aug. 1, 1917	(2)	\$315,631.00	Services.	do.	
3039	General Electric Co....	Schneectady, N. Y.	Feb. 16, 1918	(1)	\$212,100.00	Vacuum tubes.	O. R. Ewing, first lieutenant, A. S., S. R. C.	
2639-1	Supplemental to 2639....		May 17, 1918			Providing payment for development work.	do.	
92 (D. M. A.)	Wm. F. Hampton Construction Co....	Los Angeles, Calif.	Mar. 21, 1918	(1)	157,485.00	Construction Rockwell Field.	C. G. Edgar, colonel, A. S., A. P.	
Day- ton 106	Curries Engineering Co....	Garden City, N. Y.	Aug. 29, 1918	200,000.00	94,228.00	Planes.	H. E. Blood, captain, A. S., A. P.	
Day- ton 108	Dayton-Wright Airplane Co....	Dayton, Ohio....	July 10, 1918	(1)	109,320.00	Plane spares.	do.	
Day- ton 109	Fisher Body Corporation.	Detroit, Mich....	Aug. 19, 1918	(1)	\$234,307.00	Plane spares and bodies.	do.	
Day- ton 116	Packard Motor Car Co....	do.	May 8, 1918	(1)	\$600,707.00	Planes.	do.	
Day- ton 19	Springfield Aircraft Corporation.	Springfield, Mass..	Sept. 4, 1918	(1)	\$101,121.00	do.	do.	

6444	Glenn L. Martin Co.	Cleveland, Ohio.	Jan. 2, 1919	(1)	113,706.00	.....do.....	F. D. Schnacke, captain, Signal Corps.	Final payment since June 1, 1919.
Dayton 25	Packard Motor Car Co.	Detroit, Mich.	Apr. 15, 1918	(1)	*164,068.00	Plane spares	F. O. Reptogle, lieutenant.	Increased \$1,687.
2611	Glenn L. Martin Co.	Cleveland, Ohio.	Jan. 17, 1918	300,000.00	535,451.00	3 Place Corps D'Armee planes.	A. C. Downey, major, Signal Corps.	Final payment since June 1, 1919.
2611-A	Supplemental to 2611.		Nov. 14, 1918		*265,552.00	Changing from fixed price to cost plus.	F. D. Schnacke, captain, A. S., A. P.	Termination contract.
5159	Thomas Morse Aircraft Corporation.	Ithaca, N. Y.	Oct. 30, 1918	263,865.00		Plane spares	.....do.....	
5089	Packard Frisco Co.	Fort Wayne, Ind.	Oct. 18, 1919	165,000.00		Propellers	S. M. Wiley, captain, A. S., A. P.	
5098-A	Supplemental to 5089.		May 8, 1919	12,064.91		Adapter sets	F. D. Schnacke, captain, A. S., A. P.	
5194	Holt Manufacturing Co.	Peoria, Ill.	Oct. 30, 1918	425,000.00		Settlement	.....do.....	
5194-A	Supplemental to 5194.		Apr. 26, 1919	6,706.21		Steel cylinders	.....do.....	
4883	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Oct. 7, 1918	119,000.00	10,115.00	Propellers	F. D. Schnacke, captain, A. S., A. P.	
4877	Harrisburg Pipe & Pipe Bending Co.	Harrisburg, Pa.	Oct. 1, 1918	475,000.00	*475,000.00	Cylinders	.....do.....	
4878	National Tube Co.	Pittsburgh, Pa.	.....do.....	1,068,750.00	783,750.00	Steel cylinders	.....do.....	
5050	Simmons Hardware Co.	Washington, D. C.	Oct. 22, 1918	116,500.00	*43,291.00	Belts	.....do.....	
5060-A	Supplemental to 5050.		Mar. 24, 1919	82,560.56	*82,560.00	Settlement	.....do.....	
5394	Firestone Tire & Rubber Co.	Akron, Ohio	Nov. 13, 1918	136,450.00		Wheels	.....do.....	
5394-A	Supplemental to 5394.		May 20, 1919	5,313.36		Settlement	.....do.....	Final payment since June 1, 1919. Decreased \$484.
4898	International Duplex Coat Co.	New York City	Oct. 16, 1918	169,072.00	*169,583.00	Fur backs and pockets for gauntlets.	.....do.....	
5216	S. & F. Brenner (Inc.)	.....do.....	Nov. 1, 1918	146,125.00	*91,853.00	Leather helmets	S. M. Wiley, captain, A. S., A. P.	
5216-A	Supplemental to 5216.		Mar. 26, 1919	12,170.10	*12,170.00	Settlement	F. D. Schnacke, captain, A. S., A. P.	
4763	Guterman Bros.	St. Paul, Minn.	Oct. 19, 1918	167,675.00	*97,075.00	Coats	S. M. Wiley, captain, A. S., A. P.	
4763-A	Supplemental to 4763.		Apr. 22, 9	15,219.39	*15,219.00	Settlement	F. D. Schnacke, captain, A. S., A. P.	Decreased \$7,532.34.
5339	Belmont Iron Works.	Philadelphia, Pa.	Nov. 14, 1918	195,000.00	*187,417.00	Structural steel	S. M. Wiley, captain, A. S., A. P.	
5346	Kunhardt & Co.	New York City	Nov. 12, 1918	450,000.00		Castor beans	.....do.....	
5346-A	Supplemental to 5346.		May 17, 1919	24,478.78	*24,478.00	Settlement	S. M. Wiley, captain, A. S., A. P.	
4353	Godfrey Hillsbrandt.	New York City	July 22, 1918	(1)	*78,393.00	Purchasing china dog mals.	O. R. Ewing, first lieutenant, A. S., A. P.	Increased \$923.27.
3526	Electric Storage Battery Co.	Philadelphia, Pa.	June 18, 1918	163,950.00	*164,773.00	Batteries	.....do.....	Decreased \$18,675.45.
2780	Lorraine Manufacturing Co.	Pawtucket, R. I.	Feb. 7, 1918	150,000.00	*151,324.00	Aeroplane fabric	.....do.....	
2646	Western Electric Co.	New York City	Feb. 16, 1918	(1)	870,919.00	Radio telephone sets	.....do.....	
2643	.....do.....	.....do.....	Feb. 19, 1918	(1)	*78,750.00	.....do.....	.....do.....	

* Commission.

* Per item and expenses.

* Cost plus.

* Indeterminate (weekly rate per student).

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
3904	Standard Aero Corporation of New York.	Elizabeth, N. Y....	Nov. 7, 1918	(1)	\$238,644.00	Planes and spares....	O. R. E. Ing, captain, A. S. A. P.	Payments since June 1, 1919.
1485	Kessler Motor Co....	Detroit, Mich....	July 23, 1917	\$125,000.00		Engines....	A. G. Gutensohn, captain, Signal Corps.	Canceled, material not required.
1485-1	Supplemental to 1485....		Apr. 1, 1918	125,000.00		.....do.....	A. C. Downey, major, S. R. C.	Covering advance payments.
2027	Western Electric Co....	New York City....	Oct. 25, 1917	252,000.00		Telephones....	.....do.....	
2538	Breese Aircraft Corporation.	Farmingdale, Long Island.	Jan. 23, 1918	(1)	70,794.00	Engine spares....	A. C. Downey, major, Signal Corps.	
2538-1	Supplemental to 2538....		Mar. 12, 1918	(1)		Reducing 50 per cent and correcting clerical error.	Lieutenant, A. S., S. R. C.	
1895	The Rubey Co....	Cleveland, Ohio....	Nov. 3, 1917	233,047.50		Spares....	A. C. Downey, major, Signal Corps.	Increased \$7,758.
1841	Thomas Morse Aircraft Corporation.	Ithaca, N. Y....	Oct. 6, 1917	126,000.00		Engines....	F. D. Schneck, first lieutenant, A. S., S. R. C.	Increased \$600.
1911	Tindel Norris Co....	North Eddystone, Pa.	Oct. 12, 1917	300,000.00		Cylinders....	A. C. Downey, captain, S. R. C.	Increased \$250,000.
1827	Thomas Morse Aircraft Corporation.	Ithaca, N. Y....	Oct. 5, 1917	540,000.00		Airplanes....	.....do.....	
2365	Breese Aircraft Co....	Farmingdale, Long Island.	Dec. 6, 1917	(1)	891,325.00	.....do.....	.....do.....	
1573	Crown Optical Co....	Rochester, N. Y....	Aug. 21, 1917	750,000.00		Field glasses....	.....do.....	
1640	Lybrand Bros., Ross & Montgomery.	New York City....	Aug. 1, 1917	(1)	127,425.00 315,631.00	Services....	.....do.....	
2639	General Electric Co....	Schnectady, N. Y.	Feb. 16, 1918	(1)	\$212,100.00	Vacuum tubes....	O. R. Ewing, first lieutenant, A. S., S. R. C.	
2639-1	Supplemental to 2639....		May 17, 1918			Providing payment for development work.	.....do.....	
92 (D. M. A.)	Wm. F. Hampton Construction Co.	Los Angeles, Calif.	Mar. 21, 1918	(1)	157,465.00	Construction Rockwell Field.	C. G. Edgar, colonel, A. S., A.	
Day- ton 106	Curtiss Engineering Co....	Garden City, N. Y.	Aug. 29, 1918	200,000.00		Planes....	H. E. Blood, captain, A. S., A.	
Day- ton 103	Dayton-Wright Airplane Co.	Dayton, Ohio....	July 10, 1918	(1)	109,320.00	Plane spares....	.....do.....	
Day- ton 116	Fisher Body Corporation.	Detroit, Mich....	Aug. 19, 1918	(1)	\$234,307.00	Plane spares and bodies.	.....do.....	
Day- ton 19	Packard Motor Car Co....	.....do.....	May 8, 1918	(1)	\$600,707.00	Planes....	.....do.....	
Day- ton 119	Springfield Aircraft Corporation	Springfield, Mass..	Sept. 4, 1918	(1)	\$101,121.00	.....do.....	.....do.....	

5444	Glenn L. Martin Co.	Cleveland, Ohio.	Jan. 2, 1919	(1)	113,768.00	.....do.....	F. D. Schnacke, captain, Signal Corps.
Day-ton 25	Packard Motor Car Co.	Detroit, Mich.	Apr. 15, 1918	(1)	*164,068.00	Plane spares.	F. O. Replegle, lieutenant.
2611	Glenn L. Martin Co.	Cleveland, Ohio.	Jan. 17, 1918	300,000.00	525,451.00	3 Place Corps D'Armee planes.	A. C. Downey, major, Signal Corps.
2611-A	Supplemental to 2611.		Nov. 14, 1918		*265,552.00	Changing from fixed price to cost plus.	F. D. Schnacke, captain, Signal Corps.
5159	Thomas Morse Aircraft Corporation.	Ithaca, N. Y.	Oct. 30, 1918	283,965.00		Plane spares.	F. D. Schnacke, captain, A. S., A. P.
5089	Packard Piano Co.	Fort Wayne, Ind.	Oct. 18, 1919	165,000.00		Propellers.	do
5098-A	Supplemental to 5089.		May 8, 1919	12,664.91		Settlement.	do
5184	Holt Manufacturing Co.	Peoria, Ill.	Oct. 30, 1918	425,000.00		Adapter sets.	do
5184-A	Supplemental to 5184.		Apr. 25, 1919	6,709.21	*6,709.00	Settlement.	S. M. Wiley, captain, A. S., A. P.
4883	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Oct. 7, 1918	119,000.00	10,115.00	Propellers.	F. D. Schnacke, captain, A. S., A. P.
4877	Harrisburg Pipe & Pipe Bending Co.	Harrisburg, Pa.	Oct. 1, 1918	475,000.00	*475,000.00	Cylinders.	do
4878	National Tube Co.	Pittsburgh, Pa.	.....do.....	1,063,750.00	783,750.00	Steel cylinders.	do
5050	Simmons Hardware Co.	Washington, D. C.	Oct. 22, 1918	116,600.00	*43,291.00	Belts.	do
5050-A	Supplemental to 5050.		Mar. 24, 1919	82,560.56	*82,560.00	Settlement.	do
5264	Firestone Tire & Rubber Co.	Akron, Ohio.	Nov. 13, 1918	135,450.00		Wheels.	do
5294-A	Supplemental to 5264.		May 20, 1919	5,313.36		Settlement.	do
4988	International Duplex Co. Co.	New York City.	Oct. 16, 1918	169,072.00	*162,558.00	Fur backs and pockets for gaumlets.	do
5216-A	S. & F. Brenner (Inc.)	.....do.....	Nov. 1, 1918	146,125.00	*91,853.00	Leather helmets.	do
5216-A	Supplemental to 5216.		Mar. 26, 1919	12,170.10	*12,170.00	Settlement.	S. M. Wiley, captain, A. S., A. P.
4763	Guterman Bros.	St. Paul, Minn.	Oct. 19, 1918	167,675.00	*97,075.00	Coats.	F. D. Schnacke, captain, A. S., A. P.
4763-A	Supplemental to 4763.		Apr. 22, 9	15,219.39	*15,219.00	Settlement.	do
5339	Belmont Iron Works.	Philadelphia, Pa.	Nov. 14, 1918	195,000.00	*187,417.00	Structural steel.	do
5346	Kunhardt & Co.	New York City	Nov. 12, 1918	450,000.00		Castor beans.	S. M. Wiley, captain, A. S., A. P.
5346-A	Supplemental to 5346.		May 17, 1919	24,478.78	*24,478.00	Settlement.	O. R. Ewing, first lieutenant, A. S., A. P.
4353	Godfrey Hillsbroadt.	New York City	July 22, 1918	(4)	*78,393.00	Purchasing china dog mals.	do
3526	Electric Storage Battery Co.	Philadelphia, Pa.	June 18, 1918	163,960.00	*164,773.00	Batteries.	do
2780	Lorraine Manufacturing Co.	Pawtucket, R. I.	Feb. 7, 1918	150,000.00	*151,324.00	Aeroplane fabric.	do
2646	Western Electric Co.	New York City	Feb. 16, 1918	(4)	870,919.00	Radio telephone sets.	do
2643	.....do.....	.....do.....	Feb. 19, 1918	(4)	*78,760.00	.....do.....	do

* Indeterminate (weekly rate per student).

* Commission.

* Per item and expenses.

* Cost plus.

Increased \$1,687.

Final payment since June 1, 1919.

Termination contract.

Final payment since June 1, 1919. Decreased \$484.

Decreased \$7,592.34.

Increased \$923.27.

Decreased \$18,675.45.

No.	Contract Description	Location	Date	Amount	Remarks	Remarks
1888	Standard Aero Corporation of New York	Pittsfield, N. J.	Oct. 5, 1917	\$200,102.00	Airplanes	A. C. Downey, major, S. C.
1888-1	Supplemental contract to contract 1888.		May 9, 1918			Providing for additional payment of \$200 on each plane delivered to enable contractor to pay the M. A. Association royalty of \$200 per plane, thereby eliminating infringing clause in original contract. Reduced 122,500.
4299	California Castor Bean Association.	Santa Barbara, Calif.	Apr. 9, 1918	490,000.00	Planting castor beans	O. R. Ewing, first lieutenant, A. S., S. R. C.
5266	Busk & Daniels.	New York City, N. Y.	Nov. 13, 1918	196,000.00	Castor beans	F. D. Schnacke, captain, A. S. A. P.
5335	Mitsui & Co.	Seattle, Wash.	Nov. 11, 1918	196,000.00	do.	do.
4956	Liberty Iron Works	Sacramento, Calif.	Oct. 16, 1918	250,000.00	Airplanes	do.
4956-A	Supplemental contract to contract 4956.		June 18, 1919	151,775.12	Terminating contract	S. M. Wiley, captain, A. S. A. P.
2606	L. P. Lites & J. M. Malom	Dothan, Ala.	Feb. 5, 1918	350,000.00	Shelled castor beans	O. R. Ewing, first lieutenant, A. S., A. R. C.
5255	Toledo Seed & Oil Co.	Toledo, Ohio.	Nov. 4, 1918	96,000.00	Castor beans	F. D. Schnacke, captain, A. S. A. P.
4873	W. H. Mullins Co.	Salem, Ohio.	Oct. 18, 1918	191,472.01	Spare parts for planes	do.
4872-A	Supplemental contract to contract 4873.		May 19, 1919	29,971.91	Terminating contract	do.
5250	Jas. Cunningham Son & Co.	Rochester, N. Y.	Nov. 4, 1918	508,956.00	Windlasses	do.
5250-1	Supplemental contract to contract No. 5250.		Dec. 19, 1918		Terminating contract	F. D. Schnacke, captain A. S., A. P.
						No charge.
						Estimated.
						Cost plus.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
4646-A	Supplemental contract to Contract 4646.	Waltham, Mass.	May 1, 1919	\$49,900.00	*\$49,900.00	Terminating contract.	F. D. Schnacke, captain.	Paid since June 1, 1919.
4635	Waltham Watch Co.	Waltham, Mass.	Oct. 10, 1918	211,500.00	* 14,100.00	Airplane clocks.	S. M. Wiley, captain.	
4635-A	Supplemental contract to Contract 4635.	Grand Rapids, Mich.	Apr. 9, 1919	33,999.32		Terminating contract.	F. D. Schnacke, captain, A. S. A. P.	
5071	Wolverine Brass Works.	Grand Rapids, Mich.	Oct. 25, 1918	103,000.00		Interrupter gears.	S. M. Wiley, captain, A. S. A. P.	
5071-A	Supplemental contract to contract 5071.	Cincinnati, Ohio.	May 1, 1919	19,748.80	* 19,748.00	Terminating contract.	F. D. Schnacke, captain, A. S. A. P.	Do.
5312	Victor Safe & Lock Co.	Cincinnati, Ohio.	Nov. 12, 1918	174,000.00		Gun yokes, trigger controls.	F. D. Schnacke, captain, A. S. A. P.	
5312-A	Supplemental contract to contract 5312.	Chicago, Ill.	Apr. 21, 1919	7,335.62	* 7,335.00	Terminating contract.	S. M. Wiley, captain, A. S. A. P.	
5314	Electric Magnetic Tool Co.	Chicago, Ill.	Nov. 11, 1918	110,400.00		Gun yokes, trigger controls.	F. D. Schnacke, captain, A. S. A. P.	
5314-A	Supplemental contract to contract 5314.	Waterbury, Conn.	May 7, 1919	9,662.80	* 9,662.00	Terminating contract.	do.	Reduced 100,000.
5369	Bristol Co.	Waterbury, Conn.	Nov. 13, 1918	250,000.00		Air speed indicators.	S. M. Wiley, captain, A. S. A. P.	
5369-A	Supplemental contract to contract 5369.	Plainfield, N. J.	June 6, 1919	643.47		Terminating contract.	A. C. Downey, major, S. C.	
2020	Standard Oil Corporation of New York.	Plainfield, N. J.	Oct. 26, 1917	263,762.50	*163,662.00	Spare parts.	do.	
2663	Union Switch & Signal Co.	Swissvale, Pa.	Mar. 11, 1918	(¹)	236,560.00	Engine forgings.	do.	Reduced 13,579.64.
1671	Fluorop Manufacturing Co.	Chicago, Ill.	Aug. 21, 1917	190,000.00	*176,420.00	Prop. Hall-Scott A-7-A Eng.	do.	
3422	Sponsor Lens Co.	Buffalo, N. Y.	Apr. 11, 1918	* 382,500.00	51,900.00	Optical glass.	F. D. Schnacke, first lieutenant, A. S. A. P.	
3422-1	Supplemental contract to contract 3422.	Do.	July 12, 1918			Settlement clause.	do.	
3422-A	Do.	Do.	Apr. 26, 1919	172,419.12		Terminating contract.	F. D. Schnacke, captain, A. S. A. P.	Paid since June 1, 1919.

5364	Organic Salt & Acid Co...	Long Island City, N. Y.	Nov. 13, 1918	116,400.00			do.....	This contract was terminated and settled together with contracts 3854, 5046, 5135, 5253, 5325, and 710415, ordered by contract dated Feb. 20, 1919, No. 3854-A amount \$47,228.37. Contracting officer, S. M. Wiley, captain, A. S. P. Reduced 260,897.50.
1838	Standard Aero Corporation of New York.	Plainfield, N. J.	Oct. 5, 1917	530,000.00	*209,102.00	Airplanes.....	A. C. Downey, major, S. C.	Providing for additional payment of \$204 on each plane delivered to enable contractor to pay the M. A. A. Association for royalty of \$200 per plane thereby eliminating in-fringement clause in original contract. Reduced 122,500.
1838-1	Supplemental contract to contract 1838.		May 9, 1918				do.....	Reduced 260,897.50.
4299	California Castor Bean Association.	Santa Barbara, Calif.	Apr. 9, 1918	490,000.00	18,573.00	Planting castor beans.....	O. R. Ewing, first lieutenant, A. S., S. R. C.	Cancelled, material not required.
5266	Busk & Daniels.....	New York City,	Nov. 13, 1918	196,000.00		Castor beans.....	F. D. Schnacke, captain, A. S. A. P.	Payment completed after June 1, 1919. Reduced \$299,999.97.
5325	Mitsui & Co.....	Seattle, Wash.	Nov. 11, 1918	196,000.00	*196,000.00	do.....	do.....	Increased \$98,414.42.
4956	Liberty Iron Works.....	Sacramento, Calif.	Oct. 15, 1918	350,000.00		Airplanes.....	S. M. Wiley, captain, A. S. A. P.	Increased \$6,673.66.
4956-A	Supplemental contract to contract 4956.		June 18, 1919	151,775.12		Terminating contract.....	do.....	No charge.
2606	L. P. Liles & J. M. Malom	Dothan, Ala.....	Feb. 5, 1918	350,000.00	*50,030.00	Shelled castor beans.....	O. R. Ewing, first lieutenant, A. S., A. R. C.	
5255	Toledo Seed & Oil Co.....	Toledo, Ohio.....	Nov. 4, 1918	98,000.00	196,000.00	Castor beans.....	F. D. Schnacke, captain, A. S. A. P.	
4873	W. H. Mullins Co.....	Salem, Ohio.....	Oct. 18, 1918	191,472.01	*138,725.88	Spare parts for planes.....	do.....	
4873-A	Supplemental contract to contract 4873.		May 19, 1919	29,971.91	*29,971.00	Terminating contract.....	do.....	
5250	Jas. Cunningham Son & Co.	Rochester, N. Y.	Nov. 4, 1918	506,936.00		Windlasses.....	F. D. Schnacke, captain A. S., A. P.	
5250-1	Supplemental contract to contract No. 5250.		Dec. 19, 1918			Terminating contract.....	do.....	

† Estimated.

† Cost plus.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
5258	W. R. Grace & Co.	New York City, N. Y.	Nov. 5, 1918	\$392,000.00	\$22,964.00	Castor beans	F. D. Schnacke, captain, A. S. A. P.	Payments made since June 1, 1919. Do.
5259	Baker Castor Oil Co.	do.	Nov. 4, 1918	392,000.00	14,227.00	do.	do.	Do.
4480	Lamb, Finlay & Co.	do.	July 1, 1918	200,000.00	125,967.00	Services	F. D. Schnacke, first lieutenant, A. S. S.	Do.
4839	Wallington Sears Co.	do.	Sept. 2, 1918	160,500.00	39,265.00	Balloon cloth	F. D. Schnacke, captain, A. S. A. P.	Do.
5149	Springfield Aircraft Corporation	Springfield, Mass.	Nov. 1, 1918	(1)	12,805.00	Planes	do.	Do.
5135	Sturdevant Aero. Co.	Jamaica Plain, Mass.	do.	(1)		do.	do.	Do.
4918	Brewster & Co.	Long Island City, N. Y.	Oct. 17, 1918	2,967,500.00	200,000.00	do.	do.	Reduced \$2,496,000.
1018-1	Supplemental contract to contract No. 4918	do.	Nov. 6, 1918			Providing advanced payment	do.	Do.
5013	Curtiss Aero & Motor Corporation	Buffalo, N. Y.	Oct. 26, 1918	128,166.25	52,259.00	Spare parts	do.	Payments made since June 1, 1919.
1917	Western Electric Co.	New York City, N. Y.	Oct. 15, 1917	271,200.00	*271,200.00	Material	A. C. Downey, captain, S. C.	Do.
4516	Hoosier Vaneer Co.	Indianapolis, Ind.	Aug. 20, 1918	155,000.00	143,265.00	Walnut lumber	F. D. Schnacke, captain, A. S. A. P.	Reduced \$10,184.12.
4516-1	Supplemental contract to contract No. 4516	do.	Jan. 2, 1919			Providing for delivery	do.	Do.
4297	John A. Roebling's Sons Co.	Trenton, N. J.	July 16, 1918	121,750.00	*119,341.00	Wire	F. D. Schnacke, first lieutenant, A. S. S.	Reduced \$2,408.97
4319	Engel Aircraft Co.	Niles, Ohio.	Sept. 19, 1918	172,597.00	*172,597.00	Spare parts	do.	Do.
4398	Wellington Sears & Co.	New York City, N. Y.	Aug. 3, 1918	157,155.00	56,266.00	Balloon cloth	do.	Reduced \$61,000.
4479	Des Moines Sawmill Co.	Des Moines, Iowa.	Aug. 15, 1918	155,000.00	113,542.00	Walnut lumber	F. D. Schnacke, captain, A. S. A. P.	Reduced \$41,107.85.
4479-1	Supplemental contract to contract No. 4479	do.	Oct. 3, 1918			Providing for delivery	do.	Do.
4399	Wellington Sears & Co.	New York City, N. Y.	Aug. 3, 1918	108,187.50	23,316.84	Balloon cloth	F. D. Schnacke, first lieutenant, A. S. S.	Reduced \$22,000.
4454	E. J. de Nemours du Pont Co.	Philadelphia, Pa.	July 9, 1918	155,000.00	19,098.00	Solvent recovery plant	do.	Reduced \$126,000.
4626	International Register Co.	Chicago, Ill.	Oct. 10, 1918	405,000.00		Spare parts	F. D. Schnacke, captain, A. S. A. P.	Reduced \$405,000.

Contract No.	Contract description	Location	Date	Amount	Terminating contract	Remarks
5005	Supplemental contract to contract No. 483.	Cleveland, Ohio.	Apr. 23, 1919	823,508.00	Spare parts.	S. M. Wiley, captain, A. S. A. P.
5005-A	Supplemental contract to contract No. 5005.		Nov. 1, 1918	10,081.00	Terminating contract.	F. D. Schnacke, captain, A. S. A. P.
4925	Excelsior Motor Manufacturing & Supply Co.	Chicago, Ill.	Mar. 12, 1919	242,705.57	Spare parts.	do.
4925-A	Supplemental contract to contract No. 4925.		Oct. 24, 1918	67,063.76	Terminating contract.	do.
5041	Standard Aero Corporation.	Elizabeth, N. J.	Apr. 11, 1919	1,466,450.00	Planes.	O. R. Ewing, captain, A. S. A. P.
5390	Fisher Body Corporation.	Detroit, Mich.	Nov. 6, 1918	(1)	Airplanes.	F. D. Schnacke, captain, A. S. A. P.
5390-A	Supplemental contract to contract No. 5390.		Sept. 7, 1918	1.00	Terminating contract.	do.
3438	Torrington Co.	Torrington, Conn.	Apr. 30, 1919	310,000.00	Wire and rods.	F. D. Schnacke, first lieutenant, A. S. A. P.
5107	B. Shoninger & Co.	New Haven, Conn.	Apr. 17, 1918	142,750.00	Propellers.	H. C. Schnacke, captain, A. S. A. P.
5107-A	Supplemental contract to contract No. 5107.		Oct. 28, 1918	49,571.83	Terminating contract.	S. M. Wiley, captain, A. S. A. P.
5210	Stewart Hartsorn Co.	New York City, N. Y.	May 21, 1919	228,461.34	Tie rods.	F. D. Schnacke, captain, A. S. A. P.
5228	Erie Specialty Co.	do.	Nov. 5, 1918	100,186.04	Bolts and nuts, JN 4-D plane.	do.
3439	Standard Aircraft Corporation.	Elizabeth, N. J.	do.	(1)	Airplane assembling.	A. C. Downey, major, S. C.
3203	Grand Rapids Airplane Co.	Grand Rapids, Mich.	Mar. 29, 1918	2,476,298.00	Spare parts.	do.
2303-A	Supplemental contract to contract No. 3203.		Mar. 18, 1918	288,072.18	Terminating contract.	F. D. Schnacke, captain, A. S. A. P.
2682	Hall Scott Motor Car Co.	San Francisco, Calif.	May 28, 1919	1,461,492.12	Engine parts.	A. C. Downey, major, S. C.
2682-A	Supplemental contract to contract No. 2682.		Nov. 9, 1918		Terminating contract.	do.
4366	The Holt Manufacturing Co.	Peoria, Ill.	Jan. 5, 1918	212,500.00	Caterpillar truck adaptors.	F. D. Schnacke, first lieutenant, A. S. A. P.
4473	Jas. Cunningham & Co.	Rochester, N. Y.	July 26, 1918	127,500.00	Windlasses.	F. D. Schnacke, captain, A. S. A. P.
4409	Curtiss Aeroplane & Motor Co.	Buffalo, N. Y.	July 17, 1918	199,185.44	Motor spares.	do.
5086	Hardman Pack Co.	New York City	Sept. 23, 1918	117,000.00	Propellers.	do.
			Oct. 25, 1918			do.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
5218	Witherow Steel Co.....	Pittsburgh, Pa.....	Nov. 5, 1918	\$231,917.63		Wire.....	F. D. Schnacke, captain, A. S., A. P.	Canceled, material not required. Increased \$2,735.
5326	Marlin Rockwell Corporation.	New York City.....	Nov. 11, 1918	125,000.00	\$127,735.00	Radiators.....	do.....	
4382	Thomas Morse Aircraft Corporation.	Ithaca, N. Y.....	July 27, 1918	109,076.75	*109,076.00	Spare parts.....	do.....	
4977	Gordon & Ferguson.....	St. Paul, Minn.....	Oct. 15, 1918	230,360.00	20,422.00	Leather coats.....	do.....	Decreased \$155,000.
4937	Intertype Corporation.....	Brooklyn, N. Y.....	Oct. 23, 1918	435,000.00		Spare parts.....	do.....	Canceled, material not required.
4513	Witherow Steel Co.....	Pittsburgh, Pa.....	Aug. 20, 1918	170,000.00	*151,874.00	Stream line wire tie rods.	do.....	Decreased \$18,125.15.
4571	Howell & Leaser.....	San Francisco, Calif.....	Aug. 28, 1918	300,000.00	*300,175.00	Airplanes.....	do.....	Increased \$175.
4472	N. C. L. Engineering Corporation.	Providence, R. I.....	Aug. 17, 1918	325,000.00	325,000.00	Windlasses.....	do.....	
4472-1	Supplemental to 4472.....		Jan. 14, 1919			Correcting typographical error repayments.	do.....	
4452	West Virginia Aircraft Corporation.	Wheeling, W. Va.....	Aug. 13, 1918	374,110.50	*374,110.00	Spare parts.....	do.....	
4228	American Cellon Co.....	New York City.....	July 3, 1918	239,000.00	236,652.00	Cellulose acetate dope.....	F. D. Schnacke, first lieutenant, A. S., R. C.	
5220	The Silvers Co.....	South Bethlehem, Pa.....	Nov. 4, 1918	600,000.00	240,000.00	Sparcs.....	F. D. Schnacke, captain, A. S., A. P.	
5220-1	Supplemental to 5220.....		Dec. 1, 1918			Storage spark plugs.....	do.....	
5060	Hayes-Ionia Co.....	Grand Rapids, Mich.....	Oct. 24, 1918	189,900.00		Spare parts.....	do.....	
5060-A	Supplemental to 5060.....		May 19, 1919			Termination contract.....	S. M. Wiley, captain, A. S., A. P.	No charge.
5265	American Trading Co.....	New York City.....	Nov. 12, 1918	196,000.00	188,063.00	Oastor beans.....	F. D. Schnacke, captain, A. S., A. P.	Additional payment since June 1, 1919.
4518	Eastman Kodak Co. of New York.....	Rochester, N. Y.....	Aug. 20, 1918	255,000.00	51,000.00	Unit sights.....	do.....	credit contractor \$53,346.04 on the books of the sales department as final settlement charge.
5108	Starr Piano Co.....	Richmond, Ind.....	Oct. 28, 1918	119,625.00	6,349.00	Propellers.....	do.....	
5108-A	Supplemental to 5108.....		Apr. 4, 1919			Leather coats.....	do.....	
4973	Gulberman Bros.....	St. Paul, Minn.....	Oct. 14, 1918	193,340.00	16,677.00	Settlement.....	S. M. Wiley, captain, A. S., A. P.	Additional payments since June 1, 1919.
4973-A	Supplemental to 4973.....		Apr. 20, 1919	22,053.75				

4433	General Motors Corporation.	Flint, Mich.	Oct. 8, 1918	18,000,000.00	5,188.00	Liberty motors.	F. D. Schnacke, captain, A. S., A. P.	This termination contract also covers order 30071 and contracts 2286-A and 2286-S. Amt. of settlement \$3,020,740.96. Decreased \$350,000.
4433-A	Supplemental to 4433.		May 14, 1919	3,020,740.96		Termination contract.	do.	
2575	T. S. Evans.	Hamlet, N. C.	Jan. 11, 1918	875,000.00	264,464.00	Castor beans.	A. C. Downey, major, S. C.	
2575-1	Supplemental to 2575.		Jan. 15, 1918			Amending location of work to be performed.	do.	
2575-2	do.		Aug. 5, 1918			Reshelling beans 40 per cent to be deducted from voucher.	O. R. Ewing, captain, A. S., A. P.	
2575-3	do.		Aug. 27, 1918			Extending time of delivery.	do.	
4589	Willard Storage Battery Co.	Cleveland, Ohio.	Aug. 30, 1918	271,250.00	\$39,005.00	Batteries.	F. D. Schnacke, captain, A. S., A. P.	
4589-A	Supplemental to contract No. 4589.		Mar. 27, 1919	17,796.96	\$17,796.00	Termination contract.	S. M. Wiley, captain, A. S., A. P.	
4827	G. & O. Manufacturing Co.	New Haven, Conn.	Sept. 28, 1918	117,500.00	\$96,338.00	Radiators.	F. D. Schnacke, captain, A. S., A. P.	
4827-A	Supplemental to contract No. 4827.		Apr. 7, 1919	2,690.08	\$2,590.00	Termination contract.	do.	
4251	Chemical Products Co.	Cambridge, Mass.	July 24, 1918	159,600.00	\$13,164.00	Airplane dope.	do.	
4251-A	Supplemental to contract No. 4251.		Mar. 25, 1919	8,895.18	\$8,895.00	Termination contract.	F. D. Schnacke, captain, A. S., A. P.	Payments made since June 1, 1919. Terminated through payment of \$797 and crediting contractor \$80,000 on books of sales department.
5084	Unit Construction Co.	Philadelphia, Pa.	Oct. 26, 1918	152,000.00		Propellers.	S. M. Wiley, captain, A. S., A. P.	Supplemental contract made since June 1, 1919.
5084-A	Supplemental to contract No. 5084.		Apr. 24, 1919	80,797.00		Termination contract.	do.	Final payment since June 1, 1919.
5167	The Baltic Mills Co.	Baltic, Conn.	Oct. 31, 1918	236,250.00	\$15,866.00	Balloon cloth.	F. D. Schnacke, captain, A. S., A. P.	
5078	Harding Tilton Co.	New Bedford, Mass.	Oct. 20, 1918	221,000.00		Fabric.	do.	
5078-A	Supplemental to 5078.		May 26, 1919	81,160.21		Settlement.	do.	
5164	Potomaca Mills.	New Bedford, Mass.	Oct. 30, 1918	108,375.00		Balloon cloth.	do.	
5162-A	Supplemental to 5164.		May 19, 1919	42,339.47		Settlement.	do.	do.
4621	Spilldorf Electric Co.	Newark, N. J.	Sept. 13, 1918	1,887,500.00	1,766,884.00	Magneto and spares.	do.	Includes additional items.
4621-1	Supplemental to 4621.		Nov. 8, 1918				do.	Increased \$1,932.25.
4580	Wm. Whitman & Co. (Inc.).	New York City.	Aug. 28, 1918	159,387.75	\$151,340.00	Balloon cloth.	do.	

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—

Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
4604	Ford Motor Co.	Detroit, Mich.	Sept. 5, 1918	\$2,400,000.00	\$465,167.00	Cylinders.	F. D. Schnacke, captain, A. S., A. P.	Decreased \$1,430,365.56.
4604-A	Supplemental to 4604		Apr. 30, 1919	579,467.45	*579,467.00	Settlement.	do.	Decreased \$48,000.
5001	Lorraine Manufacturing Co.	Fawcuket, R. I.	Oct. 22, 1918	102,000.00	*30,096.00	Balloon cloth.	do.	Final payment since June 1, 1919.
5001-A	Supplemental to 5001		June 11, 1919	9,660.73		Settlement.	S. M. Wiley, captain, A. S., A. P.	Decreased \$105,000.
4590	Electric Storage Battery Co.	Washington, D. C.	Aug. 30, 1918	108,500.00	53,924.00	Batteries.	F. D. Schnacke, captain, A. S., A. P.	
4535	Godfrey Hillsbrandt	New York City.	Aug. 16, 1918	900,000.00	761,460.00	China dog mals.	do.	
5075	Wm. Whitman & Co.	New Bedford, Mass.	Oct. 26, 1918	780,000.00	*109,045.00	Fabric.	do.	
5075-A	Supplement to 5075		Apr. 4, 1919	210,614.41	*210,614.00	Settlement.	do.	
5408	The Wilson Body Corporation.	Bay City, Mich.	Nov. 6, 1918	794,453.00		Plane spars.	do.	Canceled; material not required.
4584	Wellington Sears Co.	New York City.	Aug. 29, 1918	213,906.25	167,143.00	Balloon cloth.	do.	Decreased \$70,000.
4585	do.	do.	do.	122,187.50	33,075.00	do.	do.	
4586	do.	do.	do.	150,900.00	141,576.00	do.	do.	
4587	The Recording Devices Co.	Dayton, Ohio.	Aug. 27, 1918	156,000.00	*156,000.00	Synchronizing generators.	do.	
5000	American Bleached Goods Co.	Taftville, Conn.	Oct. 22, 1918	153,600.00	35,813.00	Balloon cloth.	do.	
5089	Tilison Manufacturing Co.	Toledo, Ohio.	Nov. 8, 1918	Cost plus.		Carburetors.	do.	
5077	Harding Tilton & Co.	New Bedford, Mass.	Oct. 26, 1918	136,500.00	*13,833.00	Fabric.	do.	
5077-A	Supplement to 5077		Apr. 4, 1919	14,010.56	*14,010.00	Settlement.	S. M. Wiley, captain, A. S., A. P.	Decreased \$108,437.
4508	Light Manufacturing & Foundry Co.	Pittsdown, Pa.	Aug. 17, 1918	224,150.00	*179,400.00	Crank cases and bearing cups.	F. D. Schnacke, captain, A. S., A. P.	Decreased \$48,125.89.
4508-A	Supplemental to 4508		Apr. 5, 1919	624.00	*924.00	Settlement.	do.	
5355	Celluloid Co.	New York City.	Nov. 14, 1918	123,500.00	*10,117.00	Triphenyl phosphate.	do.	Decreased \$98,155.54.
5365-A	Supplemental to 5365		Apr. 24, 1919	17,226.77	*17,226.00	Settlement.	S. M. Wiley, captain, A. S., A. P.	Decreased \$132,274.10.
5200	Wm. Whitman Co.	New York City.	Nov. 1, 1918	226,800.00	26,378.00	Balloon cloth.	F. D. Schnacke, captain, A. S., A. P.	
5200-A	Supplemental to 5200.		Mar. 25, 1919	68,147.01	*68,147.00	Settlement.	do.	
4079	Springfield Aircraft Corporation.	Springfield, Mass.	June 24, 1918	(1)	900,000.00	Planes.	F. D. Schnacke, first lieutenant, A. S. S. R. C.	Additional payments since June 1, 1919.
4748	Equitable Export Co.	New York City.	Sept. 28, 1918	225,000.00		Castor beans.	F. D. Schnacke, captain, A. S., A. P.	

4748-A	Supplemental to 4748.....	Apr. 2, 1919	20,000.00	\$20,000.00	Settlement.....	S. M. Wiley, captain, A. S. A. P.	Terminating contract for \$13,041.12 made and paid since June 1, 1919.
4979	C. H. Haberkorn & Co....	Oct. 21, 1918	189,900.00		Spares.....	F. D. Schnacke, cap- tain, A. S. A. P.	Decreased \$313,000; settlement contract before Claims Board.
4979-A	Supplemental to 4979.....	Apr. 4, 1919	19,899.67		Settlement.....	do.	Terminating contract and paid since June 1, 1919.
5146	Grinnell Manufacturing Co.	Oct. 29, 1918	117,837.50		Balloon cloth.....	do.	Decreased \$105,000.
4894	Howell & Lesser.....	Sept. 13, 1918	350,000.00		Planes.....	do.	
5163	Pierce Manufacturing Co.	Oct. 30, 1918	137,062.50		Balloon cloth.....	do.	
2597	B. E. Moes and H. M. Gibb.	Jan. 14, 1918	262,500.00		Planting and growing castor beans.	O. R. Ewing, first lieutenant, A. S. S. R. C.	
2597-1	Supplemental to 2597.....	Apr. 30, 1918			Amending location of planting.	do.	
2597-2	do.....	Sept. 3, 1918			Shipment unshelled beans.	O. R. Ewing, captain, A. S. A. P.	
5378	United West India Cor- poration.	Oct. 19, 1918	900,000.00		Castor beans.....	do.	
4632	The Kosse, Shoe & Schleyer Co.	Sept. 10, 1918	155,000.00		Walnut lumber.....	do.	
4632-1	Supplemental to 4632.....	Nov. 16, 1918			Regarding delivery.....	F. D. Schnacke, cap- tain, A. S. A. P.	
4632	Hayes Manufacturing Co.	Sept. 9, 1918	105,000.00		Cylinder jackets.....	O. R. Ewing, captain, A. S. A. P.	
4628-A	Supplemental to 4628.....	Apr. 26, 1919	21,405.23		Settlement.....	S. M. Wiley, captain, A. S. A. P.	
4649	Watts, Stebbins & Co....	Sept. 10, 1918	119,687.50		Balloon cloth.....	O. R. Ewing, captain, A. S. A. P.	
4641	do.....	Sept. 9, 1918	126,743.75		do.....	do.	
4623	W. H. Mullins Manufac- turing Co.	do.	210,000.00		Cylinder water jackets.....	do.	
4623-A	Supplemental to 4623.....	May 15, 1919	21,105.83		Settlement.....	F. D. Schnacke, cap- tain, A. S. A. P.	
4623-1	do.....	Mar. 31, 1919			Restoring etc. material Constructing A. C. T., Waco, Tex.	do.	
10228	F. A. Jones Construction Co.	Aug. 25, 1917	(1)		Castor beans.....	C. G. Edgar, captain, A. S. A. P.	
2576	B. L. Hammer.....	Jan. 10, 1918	875,000.00		To accept delivery of beans unshelled; 40 per cent to be de- ducted from price.	A. C. Downey, major, Signal Corps. O. R. Ewing, captain, A. S. A. P.	Decreased \$250,000.
2576-1	Supplemental to 2576.....	July 20, 1918					

1 Cost plus.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
5271	American Bleached Goods Co.	Tataville, Conn.	Nov. 11, 1918	\$300,000.00	\$61,858.00	Balloon cloth.	F. D. Schnacke, captain, A. S. A. P.	Decreased \$210,000.
4864	Bosch Magneto Co.	New York City.	Oct. 2, 1918	320,000.00	*64,000.00	Magnetos.	do.	Contract terminated for \$25,061.20 since June 1, 1919.
4777	do.	do.	Sept. 25, 1918	750,000.00		do.	do.	Completed since June 1, 1919.
4838	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Oct. 1, 1918	180,000.00	137,670.00	Cylinders.	do.	do.
5319	W. S. Gray & Co.	New York City.	Nov. 11, 1918	124,700.00		Methyl acetate.	do.	do.
5292	Lawton Mills.	Plainfield, Conn.	Nov. 13, 1918	279,000.00	2,116.00	Balloon cloth.	do.	do.
5270	do.	do.	Nov. 12, 1918	270,000.00		do.	do.	do.
1528	Pittsburg Plate Glass Co.	Pittsburgh, Pa.	Sept. 14, 1917	105,945.00	50,124.00	Glass and plant equipment.	A. C. Downey, captain, S. C. U. S. R.	Do.
1528-A	Supplemental to 1528.		Mar. 18, 1919	18,498.66	*18,498.00	Settlement.	F. D. Schnacke, captain, A. S. A. P.	Contract terminated since June 1, 1919.
2507	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Jan. 11, 1918	12,988,000.00	2,208,216.00	Airplanes.	A. C. Downey, major, S. C.	Decreased \$37,322.07.
2266	General Motors Corporation.	Detroit, Mich.	Dec. 11, 1917	(*)	*3,697,085.00	Engines.	do.	Decreased \$45,602.92.
2266-1	Supplemental to 2266.		do.			Modification of terms of payment advanced.	do.	
2266-2	do.		Mar. 24, 1918			Increasing order by 1,000 engines.	do.	
2266-3	do.					Not executed.	do.	
2266-4	do.					do.	do.	
2266-5	do.		Oct. 2, 1918			Superseding contract cancelling original and amendments. This contract now fixed price, approximately \$24,000,000.	F. D. Schnacke, captain, A. S. A. P.	
2266-6	do.		Feb. 13, 1919			Revision of Article I in contract 2266-5 which through error was not expressed in proper manner.	do.	
2266-A	do.		May 14, 1919	3,020,641.96		Settlement.	do.	This contract also covers contract 443-A.

2331	B. F. Sturtevant Co.	Hyde Park, Mass.	Jan. 14, 1918	\$105,440.00	\$105,440.00	Engines.	A. C. Downey, major, S. C.
3311	The Silve Co.	Bethlehem, Pa.	Mar. 20, 1918	(4)	\$150,834.00	Spark plugs.	S. C.
3311-1	Supplemental to 3311.		May 9, 1918			Furnishing contract for certain equipment valued at \$5,000.	F. D. Schnacke, first lieutenant, A. S., A. P.
2330	Ordnance Engineering Corporation.	New York City	Feb. 19, 1918	(4)	113,004.00	Airplanes.	A. C. Downey, major, S. C.
3443	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Mar. 30, 1918	(4)		Plane spares.	do.
2136	Union Switch & Signal Co.	Swissvale, Pa.	Sept. 25, 1917	(4)	\$13,203,816.00	Engines.	do.
2136-1	Supplemental to 2136.		May 4, 1918			To include spare parts.	F. D. Schnacke, first lieutenant, A. S., A. P.
2136-2	do.		Nov. 8, 1918			Price of engines and spares in "reased on account of change in specifications."	F. D. Schnacke, captain, A. S., A. P.
2136	do.		Aug. 18, 1918			Canvass amendment 2136-1 and amends Article I original contract re spare parts.	F. D. Schnacke, first lieutenant, A. S., A. P.
2136 1-A	do.					Cost of all.	A. C. Downey, major, S. C.
2293	The Pierce Co.	East Rochester, N. Y.	Dec. 13, 1917	64,015.00	\$101,045.00	Construction Hazelhurst Field.	C. G. Edgar, captain, S. C.
50194	Clough Burne Corporation, contractors.	New York City	Nov. 9, 1917	(4)	\$3,116,805.00	Construction Camp No. 1, Fort Worth, Tex.	S. C.
9721	J. W. Thompson.	St. Louis, Mo.	Aug. 22, 1917	(4)	1,228,274.00	Construction training school near Houston.	C. G. Edgar, captain, S. C.
10367	American Construction Co.	Houston, Tex.	Sept. 4, 1917	(4)	\$2,388,223.00	Aviation mobilization camp for overseas.	C. S. Wallace, major, S. C.
1381	J. G. White Engineering Corporation.	New York City	June 4, 1917	(4)	636,491.00	Airplanes.	A. C. Downey, captain, S. C., U. S. R.
1839	Standard Aero Corporation of New York.	Plainfield, N. J.	Nov. 10, 1917	(4)	\$1,390,215.00	Additional spare parts.	do.
1839-1	Supplemental to 1839.		Jan. 7, 1918			Additional planes.	do.
1839-2	do.		Mar. 8, 1918			Additional spare parts.	do.
1839-3	do.		May 16, 1918			Not executed.	do.
1839-4	do.					Airplanes.	do.
2096	Standard Aircraft Corporation.	Elizabeth, N. J.	Jan. 26, 1918	(4)	7,390.00	Change in type of planes.	A. C. Downey, major, S. C.
2096-1	Supplemental to 2096.		Feb. 1, 1918			Amending number of planes of original contract.	F. D. Schnacke, first lieutenant, A. S., S. R. C.
2096-A	do.		June 19, 1918			Space necessary for testing gun, etc.	A. C. Downey, major, S. C.
2096-1	do.		May 16, 1918			Additional 120 planes.	O. R. Ewing, captain, A. S., A. P.
2096-2	do.		Sept. 21, 1918				

† Cost plus.

† Estimated.

Increased \$37,030.42

Cancelled; material not required.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service from Apr. 6, 1917 to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
2698-A-2	Supplemental to 2696		Nov. 6, 1918			800 additional planes and spares for 1,000 planes. Also this amendment supercedes original contract and amendment.	O. R. Ewing, captain, A. S. A. P.	
2698-A-3	do.		June 24, 1919	\$3,700,000.00		Settlement.	O. R. Ewing, first lieutenant, A. S. A. P.	
3475	Oliver Iron & Steel Co.	Pittsburgh, Pa.	Apr. 4, 1918	123,322.00	\$85,992.00	Bolts and washers.	R. C.	
2606	J. W. Dean and J. H. Malone	Dothan, Ala.	Feb. 13, 1918	437,500.00	135,394.00	Planting and growing castor beans.	O. R. Ewing, captain, A. S. A. P.	Decreased \$302,105.42
5236	The Presto-Lite Co.	New York City	Nov. 11, 1918	226,275.00		Tanks of acetylene gas.	F. D. Schnacke, captain, A. S. A. P.	
5236-A	Supplemental to 5236		Apr. 4, 1919	439.39	*638.00	Settlement.	O. R. Ewing, captain, A. S. A. P.	
4670	The Ohio Rubber Co.	Cleveland, Ohio	Sept. 14, 1918	200,000.00	79,371.00	Shock absorber cord.	O. R. Ewing, captain, A. S. A. P.	Increased \$475,000.
4723	Aluminum Castings Co.	do.	Sept. 16, 1918	1,776,000.00	2,215,587.00	Castings.	O. R. Ewing, captain, A. S. A. P.	
4723-1	Supplemental to 4723		Dec. 21, 1918			Changing date reception.	do.	
4723-2	do.		Jan. 27, 1919			do.	do.	
4723-3	do.		Feb. 20, 1919			do.	do.	
4263	National Pneumatic Co.	Chicago, Ill.	July 17, 1918	127,500.00	122,896.00	Gears.	F. D. Schnacke, first lieutenant, A. S. A. P.	Additional payments since June 1, 1919.
4014	do.	do.	June 8, 1918	100,000.00	*100,000.00	Gears (interrupter).	do.	Increased \$4,950.
2448	Sturtevant Airplane Co.	Jamaica Plains, Mass.	Feb. 13, 1918	263,917.50	*268,867.00	Spare parts.	do.	Increased \$1,697.50.
4417	Thomas Morse Aircraft Corporation.	Ithaca, N. Y.	Aug. 6, 1918	600,000.00	389,697.00	Airplanes.	do.	Decreased \$9.50.
1550-A	Fowler Airplane Corporation.	San Francisco, Calif.	Mar. 8, 1918	323,176.50	*323,166.00	do.	do.	Decreased \$11,567.50.
4915	Willis Overland Co.	Elmira, N. Y.	Oct. 30, 1918	148,147.50	104,421.00	Screw machine parts.	F. D. Schnacke, captain, A. S. A. P.	
4723	Diaco Manufacturing Co.	Detroit, Mich.	Sept. 27, 1918	240,000.00	217,089.00	C. C. synchronizing generators.	do.	
4723-A	Supplemental to 4723		May 31, 1919	17,139.05		Settlement.	S. M. Wiley, captain, A. S. A. P.	
4262	Sturtevant Aeroplane Co.	Boston, Mass.	July 13, 1918	234,182.50	*53,744.00	Spares.	F. D. Schnacke, captain, A. S. A. P.	Increased \$68,031.83.
2249	General Vehicle Co.	New York City	Nov. 20, 1917	1,527,568.00	*1,593,599.00	Belling and equipment.	A. C. Downey, major, Signal Corps.	

2249-1	Supplemental to 2249		May 11, 1918			Advance payment.	do.	
2249-2	do.		July 10, 1918			Amendment substituting the Government instead of Vehicle Co. in connection with railroad at plant.	F. D. Schnacke, first lieutenant, A. S. S. R. C.	
2249-3	do.		Aug. 24, 1918			Ressale office equipment, etc., to contractor.	F. D. Schnacke, captain, A. S. A. P.	
5062	Packard Motor Car Co. Supplemental to 5062.		Sept. 7, 1918		Cost plus.	Combat planes.	do.	
5062-1	Wellington Sears Co.		May 19, 1919		87,725.35	Settlement.	do.	
5293	Pratt & Lambert (Inc.)		Nov. 13, 1918		279,000.00	Balloon cloth.	do.	
5384			Nov. 12, 1918		232,500.00	Dope.	do.	Payment since June 1, 1919.
4889	Pittsburgh Model Engine Co.		Nov. 7, 1918		450,000.00	Finishing engines.	do.	Decreased \$435,000.
5231	Lawton Mills Corporation		Nov. 1, 1918		283,500.00	Balloon cloth.	do.	Completed since June 1, 1919.
5269	Wm. Whitman Co.		Nov. 13, 1918		156,000.00	Settlement.	do.	
5269-A	Supplemental to 5269.		Mar. 21, 1919		11,076.43	Magneto spares.	do.	Paid since June 1, 1919.
5119	Eriason Manufacturing Co.		Oct. 26, 1918		392,042.84	Engine spares.	do.	Completed since June 1, 1919.
5042	Steel Products Co.		Nov. 13, 1918		144,000.00	Spark plugs.	do.	Decreased \$95,809.28.
4987	Mosler & Co.		Oct. 10, 1918		1,960,000.00	Spare parts.	do.	Decreased \$1,531,000.
4987-1	Supplemental to 4987.		Oct. 19, 1918		234,579.00	Advance payment.	do.	
4416	Curtiss Aeroplane & Motor Corporation.		Sept. 6, 1918		376,654.00	Airplanes.	F. D. Schnacke, first lieutenant.	Decreased \$59,987.79.
4289	do.		July 16, 1918		495,838.98	Castor oil.	O. R. Ewing, first lieutenant, A. S. S. R. C.	Decreased \$108,215.42.
3783	do.		June 17, 1918		3,325,000.00	Planting and growing castor beans.	do.	Increased \$4,922.81.
2892	The Toledo Seed & Oil Co.		Feb. 14, 1918		189,100.00	do.	do.	Decreased \$175,000.
2823	California Castor Bean Association.		Feb. 6, 1918		437,500.00	Amendment reaccepting unshelled beans.	O. R. Ewing, captain, A. S. A. P.	Decreased \$227,500.
2852	Chamber of Commerce and Business Men's Club.		Feb. 20, 1918		437,500.00	Planting and growing castor beans.	O. R. Ewing, first lieutenant, A. S. S. R. C.	Additional payments since June 1, 1919.
2852-1	Supplemental to 2852.		Aug. 22, 1918		175,000.00	Extending date delivery.	F. D. Schnacke, captain, A. S. A. P.	Decreased \$70,000.
3007	D. C. Gillett.		Feb. 28, 1918		1,159,851.00	Construction training school, Dallas.	C. G. Edgar, captain, Signal Corps.	
3007-1	Supplemental to 3007.		Aug. 13, 1918		Cost plus.			
10162	W. C. Hedrick Construction Co.		Aug. 31, 1917					

! Estimated.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917 to June 1, 1919 in United States—Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
2954	Moe Solomon & Co.	New York City	Feb. 18, 1918	\$130,000.00	\$130,078.00	Coats	O. R. Ewing, first lieutenant, Signal Reserve Corps.	Increased \$78.
3305	Trans-Oceanic Trading Co. (Inc.).	do.	Mar. 21, 1918	490,000.00		Castor beans	do.	Canceled; material not requested.
3474	Oliver Iron & Steel Co.	Pittsburgh, Pa.	Apr. 4, 1918	1126,985.00	\$79,339.00	Bolts and washers	C. G. Edgar, captain, Signal Corps.	Decreased \$47,645.87.
3504	Unit Construction Co.	St. Louis, Mo.	June 19, 1917	Cost plus.	1,638,423.00	Construction aviation school, Belleville, Ill.	O. R. Ewing, first lieutenant, A. S. S. R. C.	Decreased \$172,919.27.
3134	Richard T. Barnhart, Irby J. Hudson.	Pearsall, Tex.	Feb. 26, 1918	175,000.00	\$2,080.00	Planting and growing castor beans.	C. G. Edgar, captain, Signal Corps, United States Reserves.	
9723	J. W. Thompson.	St. Louis, Mo.	Aug. 22, 1917	(?)	988,612.00	Construction Camp No. 3, Fort Worth, Tex.	C. G. Edgar, lieutenant colonel, Signal Corps.	Payments since June 1, 1919.
9722	do.	do.	do.	(?)	1,195,432.00	Construction Camp No. 2, Fort Worth, Tex.	do.	
50005	E. A. Wickham.	Council Bluffs, Iowa.	Sept. 15, 1917	(?)	2,081,227.00	Construction Park Field.	C. G. Edgar, lieutenant colonel, Signal Corps.	
50045	Dayton Lbr. & Manufacturing Co.	Dayton, Ohio	Oct. 1, 1917	(?)	801,026.00	Construction Wilbur Wright.	C. G. Edgar, colonel, Signal Corps.	
DMA-110	University of Illinois.	Champaign County, Ills.	Aug. 27, 1918	(?)	205,825.00	Military aeronautics training.	do.	
DMA-102	Ohio State University.	Franklin County, Ohio.	Aug. 26, 1918	(?)	172,559.00	do.	do.	
DMA-123	Massachusetts Institute of Technology.	Cambridge, Mass.	Sept. 9, 1918	(?)	146,191.00	do.	do.	
DMA-123	Supplemental to DMA-102.	do.	Oct. 6, 1918			Provides course in aeronautical engineering.	T. H. Rane, colonel, Signal Corps.	
DMA-246	Willys-Overland (Inc.).	Toledo, Ohio.	July 1, 1918	106,466.95	\$61,220.00	Lease building at St. Paul.	C. G. Edgar, colonel, Signal Corps.	Decreased \$45,249.73.
DMA-463	Supplemental to DMA-246.	do.	Jan. 10, 1919			Terminating lease.	W. F. Volandt, captain, A. S. A.	Increased \$287,500.
4090	Wolverine Brass Works.	Grand Rapids, Mich.	June 17, 1918	312,500.00	\$600,000.00	Mounts	F. D. Schmucke, first lieutenant, A. S. S. R. C.	Increased \$70,320.82.
4155	B. Rhoderger & Co.	New Haven, Conn.	June 26, 1918	190,000.00	\$225,672.00	Propellers.	do.	
4155-1	Supplemental to 4155.	do.	Oct. 2, 1918			Re storing, etc.	F. D. Schmucke, captain, A. S. A.	
4155-2	do.	do.	May 8, 1919	34,646.53	\$34,648.00	Settlement.	H. V. Schermerhorn, captain, Signal Reserve Corps.	Payments since June 1, 1919.
Feverman-3	Panther Auto Supply Co.	Fort Worth, Tex.	Dec. 27, 1917	(?)	\$168,781.00	Gasoline	A. C. Downey, major, Signal Corps.	
2280	Wright-Martin Aircraft Corporation.	New Brunswick, N. J.	Nov. 12, 1918	(?)	29,615,776.00	Engines, spares, tools	do.	

2250-1	Supplemental to 2250	Feb. 2, 1918	Feb. 2, 1918	Additional 1,000 engines and spares.	do.
2250-2	do.	Feb. 25, 1918	Feb. 25, 1918	Additional 1,000 engines as required from time to time.	do.
2250-3	do.	May 25, 1918	May 25, 1918	Re contractor, furnishing equipment of rejected parts, etc.	do.
2250-4	do.	May 27, 1918	May 27, 1918	3,000 additional engines. Re subcontractors	F. D. Schnacke, first lieutenant, A. S. P., N. A.
2250-5	do.	Aug. 1, 1918	Aug. 1, 1918	Additional 1,000 engines	O. R. Ewing, captain, A. S. A. P.
2250-6	do.	Sept. 19, 1918	Sept. 19, 1918	Trucks.	F. D. Schnacke, captain, A. S. A. P.
2250-7	do.	Oct. 31, 1918	Oct. 31, 1918	do.	O. R. Ewing, first lieutenant, Signal Reserve Corps.
2609	Standard Motor Truck Co.	Jan. 16, 1918	747,007.50	Trucks.	F. D. Schnacke, captain, A. S. A. P.
2632	General Motors Truck Co.	Jan. 24, 1918	\$1,577,009.00	Electrical equipment.	do.
1949	Western Electric Co.	Aug. 10, 1918	\$1,500,000.00	Structural steel.	do.
4497	Blaw-Knox Co.	Aug. 19, 1918	215,600.00	Windlasses.	do.
4474	McKeen Motor Car Co.	Aug. 17, 1918	175,000.00	Fabric.	do.
5074	Dartmouth Manufacturing Co.	Oct. 26, 1918	1,300,000.00	Planting and growing castor beans.	O. R. Ewing, first lieutenant, A. S., R. C.
2649	Fred L. Boniff	Jan. 27, 1918	437,500.00	Trucks.	do.
2587	Republic Motor Truck Co	Jan. 16, 1918	1,024,850.00	Advanced payment	O. R. Ewing, captain, A. S., A. P.
2587-1	Supplemental to 2587	June 27, 1918		Trucks.	O. R. Ewing, first lieutenant, A. S., R. C.
2531	Velle Motors Corporation.	Jan. 16, 1918	\$1,226,412.00	Compasses.	F. D. Schnacke, captain, A. S., A. P.
5383	General Electric Co.	Nov. 8, 1918	456,000.00	Planes.	do.
4709	Springfield Aircraft Corporation.	Nov. 1, 1918	1,050,000.00	Altimeters.	do.
4632	Taylor Instrument Co.	Oct. 10, 1918	836,250.00	Windlasses.	do.
4474	McKeen Motor Car Co.	Aug. 17, 1918	175,000.00	Tires.	do.
4905	Goodrich Rubber Co.	Oct. 8, 1918	187,688.00	Interrupter gear.	do.
4460	International Register Co.	Aug. 13, 1918	218,500.00	Mechanics suits.	do.
4809	H. D. Lee Mercantile Co.	Sept. 27, 1918	156,000.00	Airplane engine heaters.	do.
5256	The American Stove Co.	Nov. 2, 1918	177,000.00	Services special machine-ist, and new machinery plant.	O. R. Ewing, captain, A. S., A. P.
5361	Liberty Crankshaft Co.	Oct. 14, 1918	Cost plus.		

⁶ Plus 3 per cent war tax.

' 27 cents per gallon.

Indeterminate.

Cost plus.

Estimated.

List A of formal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919 in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
4773	St. Louis Aircraft Corporation.	St. Louis, Mo.	Sept. 25, 1918	\$700,000.00	.....	Airplanes.	O. O. Ewing, captain, A. S. A. P.	Decreased \$497,000.
2454	Federal Motor Manufacturing Co.	Chicago, Ill.	Jan. 23, 1918	295,000.00	*\$295,000.00	Engines.	A. C. Downey, major, A. S. A. P.	
5056	Olds Motor Co.	Lansing, Mich.	Sept. 20, 1918	1,975,000.00	220,914.00	Spare parts.	A. C. Downey, lieutenant colonel, A. S. A. P.	Increased \$1,604,000.
2456	Hall-Scott Motor Car Co.	West Berkeley, Calif.	Feb. 6, 1918	1,500,000.00	*779,868.00	Engines.	A. C. Downey, major, A. S. A. P.	
2456-1	Supplemental to 2456.		Apr. 6, 1918	.....	.....	Confirms cancellation 500 engines under original contract and provides for same as per amendment.	F. D. Schnacke, first lieutenant, S. R. C.	
2696	Standard Aircraft Corporation.	Elizabeth, N. J.	Jan. 26, 1918	Cost plus.	3,698,500.00	Airplanes.	A. C. Downey, major, S. C.	Settlement contract since June 1, 1919 \$3,700,000; this covers the eighth item on list A-16 (same contract).
2696-1	Supplemental to 2696.		Feb. 1, 1918	.....	.....	Substitution D. H. 4's for D. H. 9's.	do.	
2696-2	do.		Sept. 21, 1918	.....	.....	Additional 120 D. H. 4's.	O. R. Ewing, captain, A. S. A. P.	
2696-A	do.		June 19, 1918	.....	.....	Substitution of D. H. 4's for D. H. 9's.	F. D. Schnacke, captain, A. S. A. P.	
2696-A-1	do.		May 16, 1918	.....	.....	Covering space for testing guns, etc.	A. C. Downey, major, A. S. A. P.	
2696-A-2	do.		Nov. 6, 1918	.....	.....	Additional D. H. 4's and spares.	O. R. Ewing, captain, A. S. A. P.	
2042	Lewis Thompson & Co. (Inc.).	Philadelphia, Pa.	Nov. 23, 1917	300,000.00	154,368.00	Mahogany.	A. C. Downey, major, S. C.	
3853	Supplemental to 2042.		Dec. 4, 1917	.....	.....	Advanced payments.	do.	
3853-1	Anderson Motor Co.	Rock Hill, S. C.	May 11, 1918	142,992.96	73,286.00	Trailers.	O. R. Ewing, first lieutenant, A. S. A. P.	
3853-2	Supplemental to 3853.		Mar. 10, 1919	.....	.....	Increase unit price to cover losses to contractor due to change in specifications on 3853 and 3719.	F. D. Schnacke, captain, A. S. A. P.	

List E of informal contracts aggregating \$100,000 or over made by or under Air Service from Apr. 6, 1917, to June 1, 1919, in United States.
 (Starred items in the column headed "Amount Expended" include final payment.)

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
ASA-9	Settlement claim under Dent Act on contract 73085 (above).		Apr. 10, 1919	\$3,273.94	\$3,273.00	Material and freight 110-horsepower engines.	G. I. Rowley, captain, A. S., A. P.	
ASA-10	do.		do.	9,975.83	\$9,975.00	Material, 80-horsepower engines.	do.	
720475	Fisher Body Corporation.	Detroit, Mich.	Sept. 5, 1918	100,000.00		Spares.	F. D. Schnacke, captain, A. S., A. P.	Final payment since June 1, 1919.
4626	Supplemental to 720475.		May 23, 1919	94,073.04			S. M. Willey, captain, A. S., A. P.	
20670	Wright-Martin Aircraft Corporation.	New Brunswick, N. J.	Mar. 2, 1918	1,060,000.00		Planes.	F. D. Schnacke, first lieutenant, A. S., A. P.	Canceled; material not required.
20770	Dayton-Wright Airplane Corporation.	Dayton, Ohio	Mar. 16, 1918	(1)		Spares.	do.	Do.
108	West & Dodge Co.	Boston, Mass.	Mar. 14, 1918	\$50,000.00	\$221,413.00	Gauges.	do.	Increased \$220,000; final payment since June 1, 1919.
810047	Secretary of Navy.	Washington, D. C.	Oct. 16, 1918	269,992.00		Ferrosilicon.	A. C. Downey, captain, A. S., A. P.	
810050	do.	do.	Oct. 19, 1918	229,160.00		do.	A. C. Downey, lieutenant colonel, A. S., A. P.	
20018	B. F. Goodrich Co.	Akron, Ohio	Sept. 25, 1917	\$670,750.00	\$137,400.00	Balloons.	A. C. Downey, captain, A. S., A. P.	Decreased \$533,350.
810040	Cocoanut Plantation Co.	Boston, Mass.	Oct. 10, 1918	765,000.00		Castor beans.	O. R. Ewing, captain, A. S., A. P.	Decreased \$755,000.
710880	Packard Motor Car Co.	Detroit, Mich.	Feb. 13, 1919	100,000.00		Engine spares.	F. D. Schnacke, captain, A. S., A. P.	Payments since June 1, 1919
710882	do.	do.	do.	160,000.00		do.	do.	Canceled since June 1, 1919.
710499	Ginsold Mills.	New Bedford, Mass.	Oct. 26, 1918	121,125.00		Balloon cloth.	do.	Do.
720805	Singer Manufacturing Co.	Bridgeport, Conn.	Oct. 30, 1918	178,159.16		Wire fittings.	do.	Canceled.
720816	Hayes-Lonia Co.	Grand Rapids, Mich.	Nov. 14, 1918	1,572,083.00		Spare parts.	O. R. Ewing, captain, A. S., A. P.	Canceled; material not required.
570232	Spruce Production Corporation.	Washington, D. C.	Dec. 2, 1918	\$9,999,300.00	\$99,993.00	Stock.	do.	Under authority act of Congress No. 193, approved July 9, 1918.
720738	Secretary of the Navy.	do.	Nov. 2, 1918	150,000.00	\$166,000.00	Balloons.	A. C. Downey, lieutenant colonel, A. S., A. P.	Increased \$16,000.
720606	do.	do.	Oct. 15, 1918	2,000,000.00		Hydroplanes.	do.	
720720	do.	do.	Oct. 18, 1918	330,000.00	70,000.00	Balloons.	do.	
721046	do.	do.	Feb. 4, 1919	124,420.00		Flying boats and spares.	do.	Decreased \$12,684.86.

* Estimated.

1 Cost-plus.

List E of informal contracts aggregating \$100,000 or over made by or under Air Service for Air Service from Apr. 6, 1917, to June 1, 1919, in United States—
Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
721069	Secretary of the Navy...	Washington, D. C.	Mar. 11, 1919	\$124,000.00		Flying boats.	W. A. Miller, first lieutenant, A. S., A. P.	Decreased \$12,264.86.
840214	Glanni Caproni.....	Milan, Italy.....	Apr. 19, 1919	210,717.86		1 and 2 Caproni missions.	G. I. Rowley captain, A. S., A. P.	See Contracts with foreign countries.
50016	Stone & Webster.....	Boston, Mass.....	Sept. 14, 1917	(1)		Construction.	C. G. Edgar, captain, A. S., A. P.	Canceled Feb. 2, 1918.
710675	Rogers & Cleaver, receivers, Champion Lumber Co.	Sunburst, N. C.....	Nov. 9, 1918	156,000.00		Spruce lumber.	F. D. Schnacke, captain, A. S., A. P.	
72279	John A. Hill.....	Harlington, Tex..	Feb. 15, 1918	175,000.00		Planting and growing castor beans.	O. R. Ewing, first lieutenant, A. S., R. C.	Canceled.
30206	General Motors Co.....	Detroit, Mich.....	Jan. 2, 1918	6,760,000.00		Engine and spare parts.	A. C. Downey, major.	Do.
72473	Ernest Hall Coalidge.....	New York City...	Feb. 26, 1918	878,400.00		Castor oil.	O. R. Ewing, first lieutenant, A. S., R. C.	Do.
20455	Secretary of the Navy...	Washington, D. C.	Jan. 12, 1918	150,000.00	113,400.00	Seaplanes	Newton D. Baker, Secretary of War.	Completed since June 1, 1919.
72489	D. C. Gillett.....	Tampa, Fla.....	Feb. 27, 1918	175,000.00		Planting and growing castor beans.	O. R. Ewing, first lieutenant, A. S., R. C.	Canceled.
72548	British ministry of munitions in United States.	Washington, D. C.	Feb. 28, 1918	2,250,000.00		Castor oil.	do.	Do.
90070	Quartermaster (General United States Army.	do.	Oct. 10, 1917	320,000.00		Motor chassis	M. C. Bristol, lieutenant colonel.	Do.
90022	do.	do.	Sept. 26, 1917	635,000.00		Motor equipment	do.	Decreased \$162,157.77.
90058	do.	do.	Oct. 9, 1917	\$ 3,947,200.00	\$ 472,842.00	Trucks.	do.	Decreased \$3,947,200; canceled.
7943	Quartermaster General...	U. S. Army.....	May 28, 1917	\$ 175,350.00		Request for purchase of chassis.	C. S. Wallace, major, S. C.	Canceled; material not required.
8114	do.	do.	June 4, 1917	\$ 200,000.00		Radio tractor chassis.	do.	Do.
8793	do.	do.	July 13, 1917	\$ 166,250.00	\$ 197,594.00	Motor cycles, cars, and trucks.	C. S. Wallace, lieutenant colonel, S. C.	Do.
9593	Chief of Ordnance.....	do.	Aug. 22, 1917	290,000.00		Copper.	Geo. H. Brett, major, S. C.	Do.
7886	J. G. Brill Co.....	Philadelphia, Pa..	May 22, 1917	(1)		Wire carts.	C. S. Wallace, major, S. C.	Do.
9374	Western Electric Co.....	New York City...	Aug. 11, 1917	168,000.00	\$ 168,000.00	Buzzer telephone.	L. M. Evans, captain, S. C. U. S. R.	Do.
9167	do.	do.	July 31, 1917	\$ 275,000.00	\$ 212,978.00	Construction supplies	do.	Do.
8433	Fisher Body Corporation.	Detroit, Mich.....	June 21, 1917	2,500,000.00		Airplanes	C. S. Wallace, lieutenant colonel, S. C.	Do.
4116	Dayton-Wright Airplane Co.	Dayton, Ohio.....	do.	2,500,000.00		do.	do.	Do.

9865	Langrock Bros. Co.....	Brooklyn, N. Y..	Aug. 22, 1917	114,000.00	Overall suits.....	A. C. Downey cap- tain, S. C. U. S. R.	Do.
10286	Underwood Typewriter Co.	Washington, D. C.	Sept. 10, 1917	155,925.00	Typewriters.....	A. C. Downey, cap- tain, S. C.	Decrease by adjust- ment voucher.
10289	Corona Typewriter Co.....	do.	do.	141,750.00	do.	do.	Canceled; taken over by Spruce Produc- tion Corporation.
10337	Quinault Lumber Co.....	Raymond, Wash.	Sept. 12, 1917	168,000.00	Spruce.....	do.	Do.
10338	Siler Mill Co.....	do.	do.	420,000.00	do.	do.	Do.
10339	Aloha Lumber Co.....	Aloha, Wash.	do.	420,000.00	do.	do.	Do.
10341	Raymond Lumber Co.....	Raymond, Wash.	do.	126,000.00	do.	do.	Do.
10342	Willapa Lumber Co.....	do.	do.	420,000.00	do.	do.	Do.
10343	Buelner Lumber Co.....	North Bend, Ore.	do.	126,000.00	do.	do.	Do.
10344	Multnomah Lumber & Box Co.	Portland, Ore.	do.	420,000.00	do.	do.	Decreased \$399,255.17; balance taken over by Spruce Produc- tion Corporation.
10345	Brighton Mill Co.....	Tillamook, Ore.	do.	420,000.00	do.	do.	Decreased \$345,032.16; balance taken over by Spruce Produc- tion Corporation.
10346	Puget Sound Mill & Lum- ber Co.	Port Angeles, Wash.	do.	252,000.00	do.	do.	Canceled; taken over by Spruce Produc- tion Corporation.
10348	North Bend Mill & Lum- ber Co.	North Bend, Ore.	do.	168,000.00	do.	do.	Do.
10349	Astoria Box Co.....	Astoria, Ore.	do.	420,000.00	do.	do.	Decreased \$410,224.19; Decreased \$310,750.
20527	B. F. Goodrich Co.....	Akron, Ohio	Jan. 25, 1918	*400,000.00	Balloons.....	A. C. Downey, major, S. C.	Do.
20528	do.	do.	do.	*9,775.00	do.	do.	Do.
20356	Macy Engineering Co.....	Franklin, Pa.	Dec. 20, 1917	*562,552.00	Electrical controls.....	do.	Decreased \$237,447.12; Decreased \$185,000.
710357	Dartmouth Manufactur- ing Co.	New Bedford, Mass	Oct. 15, 1918	120,000.00	Balloon cloth.....	F. D. Schnacke, first lieutenant, S. C.	Canceled; material not required.
21041	Secretary of Navy.....	Washington, D. C.	Apr. 29, 1918	210,000.00	Mercury.....	do.	Do.
720308	Grand Rapids Airplane Co.	Grand Rapids, Mich.	Oct. 2, 1918	400,000.00	Airplane tools.....	F. D. Schnacke, cap- tain, S. C.	Decreased \$392,000.
730473	Spiltdorf Electrical Co....	Newark, N. J.	Sept. 27, 1918	384,800.00	Magneto parts.....	O. R. Ewing, captain, A. S. A. P.	Canceled; material not required.
720773	Curtiss Aero & Motor Corporation.	Buffalo, N. Y.	Oct. 28, 1918	1,400,000.00	Airplanes.....	F. D. Schnacke, first lieutenant, S. C.	Do.
880021	Federal Truck Co.....	Detroit, Mich.	Oct. 15, 1918	120,906.25	Services.....	O. R. Ewing, first lieutenant, A. S. A.	Do.
40415	Navy Department.....	Washington, D. C.	Nov. 16, 1917	156,300.00	Transmitting sets and spares.....	Secretary of War.....	Do.
810059	U. S. Fruit Co.....	Boston, Mass.....	Nov. 2, 1918	894,200.00	Castor beans.....	O. R. Ewing, first lieutenant, A. S. A.	Do.
810021	Electro Metallurgical Sales Corporation.	New York, N. Y.	Aug. 19, 1918	241,500.00	Forstillon.....	F. D. Schnacke, cap- tain, S. C.	Do.
720171	Jas. Cunningham & Co....	Rochester, N. Y.	Aug. 2, 1918	350,000.00	Balloon windlasses.....	do.	Do.

* Estimated.

* Original contract in files of Purchase, Storage and Traffic Division.

* Cost plus.

List E of informal contracts aggregating \$100,000 or over made by or under Air Service from Apr. 6, 1917, to June 1, 1919, in United States—Continued.

Contract No.	Contractor.	Contractor's address.	Date of contract.	Amount of contract.	Amount expended to June 1, 1919.	Nature of contract.	Officer or person executing contract.	Remarks.
726546	Harrisburg Pipe & Pipe Bending Co.	Harrisburg, Pa....	Sept. 20, 1918	\$1,543,750.00		Steel cylinders.....	O. R. Ewing, first lieutenant, S. C.	Canceled; material not required.
726313	U. S. Aircraft Corporation	Redwood City, Calif.	Aug. 26, 1918	200,000.00		Airplanes.....	F. D. Schnacke, captain, S. C.	Do.
90072	Quartermaster General	Washington, D. C.	Oct. 10, 1917	1210,000.00	161,062.00	Autos and motor cycles.	C. A. Seokane, lieutenant colonel, S. C.	
9132	do.	do.	Aug. 2, 1917	1600,000.00	94,533.00	Motor equipment.....	G. H. Brett, captain, S. C.	
9477	Director Bureau of Standards.	do.	Aug. 15, 1917	1100,000.00	98,375.00	Equipment and employment of personnel.	R. M. Jones, captain, S. C.	
9064	Quartermaster General.	do.	July 26, 1917	1153,000.00	88,586.00	Motor equipment.....	Geo. Brett, captain, S. C.	
8837	do.	do.	July 17, 1917	1176,000.00	*189,658.00	.....do.	G. H. Brett, captain, S. C.	Increased \$13,658.
9456	Chief of Ordnance, U. S. Army.	do.	Aug. 15, 1917	1100,000.00	*5,935.00	Ammunition.....	R. M. Jones, captain, S. C.	Decreased \$94,065.
90063	Quartermaster General	do.	Oct. 9, 1917	150,800.00		Truck bodies.....	C. A. Seokane, lieutenant colonel, S. C.	
60203	do.	do.	Oct. 13, 1917	1103,500.00		Gasoline drums.....	do.	
9451	Chief of Ordnance, U. S. Army.	do.	Aug. 22, 1917	1940,000.00		Machine guns and ammunition.	G. H. Brett, major, S. C.	
8553	Quartermaster General	do.	July 2, 1917	179,180.00	109,883.00	Motor equipment.....	Chas. Wallace, lieutenant colonel, S. C.	
8338	do.	do.	June 18, 1917	100,800.00		.....do.	do.	
7899	do.	do.	May 26, 1917	1264,500.00	195,346.00	.....do.	Chas. Wallace, major and lieutenant colonel, S. C.	Increased \$500.
90117	do.	do.	Oct. 30, 1917	1404,255.00	103,147.00	.....do.	C. A. Seokane, lieutenant colonel, S. C.	
10286	do.	do.	Sept. 12, 1917	1427,500.00	*130,350.00	.....do.	do.	Decreased \$297,150.
20429	Curtiss Airplane & Motor Corporation.	Buffalo, N. Y....	Feb. 4, 1918	2,332,500.00		Spares.....	O. R. Ewing, first lieutenant, S. R. C., A. S.	Canceled; material not required.
20404	Lewis Spring & Axle Co..	Chelsea, Mich.....	Feb. 16, 1918	1122,000.00	*4,169.00	Metal parts.....	F. D. Schnacke, first lieutenant, S. R. C., A. S.	Decreased \$117,831.
20270	Bureau of Mines.....	Washington, D. C.	Nov. 22, 1917	500,000.00	*227,818.00	Argon gas.....	C. A. Seokane, lieutenant colonel, S. C.	Decreased \$272,181.50.

870173	Spruce Production Corporation.	.....do.....	Oct. 14, 1918	\$ 25,000,000.00	\$21,500,000.00	Debentures.....	O. R. Ewing, captain, A. S., A. F. ¹	Decreased \$1,500,000. Under authority of act of Congress No. 193 approved July 9, 1918.
42799	Optical Annex, Naval Gun Factory.	.....do.....	May 16, 1918	\$ 1,850,000.00		Field glasses.....	R. M. Jones, major, S. C.	Canceled; material not required.
730212	Disco Manufacturing Co.	Detroit, Mich.	Aug. 16, 1918	150,000.00		Generators.....	F. D. Schnaake, cap- tain, A. S., A. F.	Do.
730223	Winton Motor Car Co.	Cleveland, Ohio.	Aug. 20, 1918	4,200,000.00		Engines.....	do	Do.
880001	McKeen Motor Car Co.	Omaha, Nebr.	July 11, 1918	578,126.50		Windlasses.....	O. R. Ewing, captain, S. C.	Do.
20250	Director Bureau of Mines.	Washington, D. C.	Nov. 14, 1917	144,000.00	62,332.00	Investigation and ex- periments of oxygen apparatus.	C. A. Seane, Lieuten- ant colonel, S. C.	Decreased \$65,200.
10345	Brighton Mill Co.	Tillamook, Oreg.	Sept. 12, 1917	420,000.00	\$74,947.00	Spruce.....	A. C. Downey, cap- tain, S. C.	Decreased \$345,032.18; balance canceled.
10344	Multnomah Lumber & Box Co.	Portland, Oreg.	.....do.....	420,000.00	\$20,743.00	.....do.....	.....do.....	Decreased \$399,256.17.
30004	Wright-Martin Aircraft Corporation.	New York City.	Sept. 27, 1917	2,500,000.00		Engines.....	.....do.....	Canceled; material not required.
730265	Union Switch & Signal Co.	Swissvale, Pa.	Sept. 3, 1918	720,000.00			F. D. Schnaake, cap- tain, S. C.	
ASA9	Supplemental to 730265.	.....do.....	.....do.....				G. I. Rowley, captain, A. S., A. F.	

¹ Estimated.

* Transferred to General Staff.

Mr. FREAR. I have here, for the next exhibit, a two-page statement, entitled "Construction at Air Service Stations," and says it gives the amounts under "Cost of buildings" to cover everything in construction at the several stations. There are several columns, and the first one is "Location," and the next one, "Class or character," and the next one, "Date of contract," and the next one, "Date of purchase," and the next one, "Cost of land," and the next one, "Cost of buildings," and the next one, "Payments to July 15, 1919," and the next one, "Balance due," and the next one, "Officer in charge, July 15, 1919," and the last one, "Remarks." These columns have not been totaled, so I will not refer to them at this time, nor to this statement further than to say that I will introduce it as an exhibit; and apparently this gives the cost of the buildings and everything in the matter of construction at the several stations. That is your understanding, is it?

Gen. MENOHER. Yes, sir.

Mr. FREAR. I will ask that it be marked "Exhibit No. 103 (Gen. Menoher, Exhibit D)" and inserted in the record.

(The paper referred to is printed in full in the record, and is as follows:)

EXHIBIT No. 103. (Gen. MENOHER, EXHIBIT D.)
Construction at Air Service stations.

[The amounts given under "Cost of buildings" includes everything in construction at the several stations.]

Location.	Class or character.	Date of contract.	Date of purchase.	Cost of land.	Cost of buildings.	Payments to July 15, 1919.
Americus, Ga.	Souther Field—flying training.	Feb. 7, 1918	July 5, 1919	\$32,534.40	\$1,374,931.68	\$1,358,685.75
Do.	General supply depot.	Mar. 30, 1918			473,574.42	464,484.50
Anacostia, D. C.	Bolling Field, flying.	May 21, 1918			364,760.95	364,760.95
Aracadia, Fla.	Carlstrom Field, flying.	Dec. 3, 1917	June 28, 1919	5,120.00	1,338,728.07	1,300,619.44
Do.	Dorr Field, flying.	do.	do.	5,120.00	1,508,018.21	1,508,018.21
Aracadia, Calif.	Ross Field, flying.	June 14, 1918	(¹)		525,831.80	525,831.00
Baltimore, Md.	Johns Hopkins University, training school.	June 10, 1918	(²)		25,439.08	24,331.00
Bellefonte, Ill.	Scott Field, flying field.	June 25, 1917	(³)		1,760,680.00	1,760,680.00
Brooklyn, N. Y.	Pratt Institute, training school.	Mar. 4, 1918	(⁴)	119,263.84	13,703.58	13,268.07
Buffalo, N. Y.	Acceptance Park, testing field.	150 leases	(⁵)		561,187.59	561,187.59
Chicago, Ill.	Grant Park steel hangar.	Erected in City Park.			3,000.00	3,000.00
Dallas, Tex.	Love Field—flying, training.	Aug. 21, 1917	(⁶)		1,350,565.86	1,340,884.15
Do.	Repair depot.	Nov. 2, 1917	(⁷)		780,427.01	773,727.70
Dayton, Ohio	Camp Dick, gunnery school.	Oct. 1, 1917	(⁸)		11,766.00	11,766.00
Do.	McCook Field, experimental.	do.	(⁹)		1,179,479.15	1,166,439.05
Detroit, Mich.	Acceptance park, testing field.	June 10, 1918	(¹⁰)		419,279.87	419,279.87
Do.	Saxon Motor plant, warehouse.	May 2, 1918	(¹¹)		41,500.00	41,500.00
Elizabeth, N. J.	Acceptance park, testing field.	May 13, 1918	(¹²)		223,339.73	223,339.73
Essington, Pa.	do.	Sept. 20, 1918	(¹³)		165,515.27	165,515.27
Fairfield, Ohio.	Chandler Field, flying.	May 27, 1917	(¹⁴)		14,242.45	13,770.58
Do.	Wilbur Wright Field, flying.	Mar. 4, 1918	(¹⁵)		3,185,702.26	3,116,960.91
Do.	Gunnery school, Wilbur Wright.	Aug. 22, 1917	(¹⁶)	8,000.00	249,040.90	248,337.13
Fayetteville, N. C.	Supply depot.	Aug. 22, 1918	June 16, 1917		1,101,312.00	1,074,269.49
Fort Omaha, Nebr.	Camp Bragg.	July 24, 1917	(¹⁷)		31,613.44	31,613.44
Fort Sam Houston, Tex.	Balloon school, training.	July 6, 1917	(¹⁸)		631,923.76	629,848.45
Fort Worth, Tex.	Storehouse.	Aug. 30, 1917	(¹⁹)		339,259.53	332,601.27
Do.	Talala Field—flying, training.	Sept. 1, 1917	(²⁰)		1,446,230.12	1,422,151.18
Do.	Carruthers Field—flying, training.	Sept. 1, 1917	(²¹)		1,353,535.18	1,327,026.36
Do.	Langley Field—flying, training.	Sept. 25, 1917	(²²)		1,215,033.91	1,182,482.01
Do.	Ford Island, seaplane station.	Aug. 1, 1917	1916	260,000.00	8,393,741.42	8,459,284.05
Do.	Fort Kamehameha.	do.	(²³)		59,551.17	59,551.17
Do.	Ellington Field—flying, training.	Sept. 4, 1917	(²⁴)		3,000.00	3,000.00
Do.	Post field—flying, training.	July 28, 1917	(²⁵)	86,178.00	2,561,182.86	2,539,786.75
Do.	Balloon school.	Apr. 8, 1918	(²⁶)	(^e)	1,931,921.88	1,903,273.56
Do.	Engine repair depot.	Nov. 5, 1917	(²⁷)	(^e)	443,540.56	443,540.56
Indianapolis, Ind.	do.		(²⁸)		672,560.83	672,560.83

¹ Government reservation.
² Included in Fort Sill.

³ Not available.
⁴ Owned by Government.

⁵ Land and buildings owned by State.
⁶ No contract.

⁷ Included in Souther Field.
⁸ On filled land owned by Government.
⁹ Not purchased

Construction at Air Service stations—Continued.

Location.	Class or character.	Date of contract.	Date of purchase.	Cost of land.	Cost of buildings.	Payments to July 15, 1919.
Lake Charles.....	Gerstner Field—flying, training.....	Apr. 8, 1918	(1)	.....	\$2,774,626.97	\$2,689,049.57
Little Rock, Ark.....	Aviation general supply depot.....	July 8, 1918	(1)	.....	1,052,783.27	1,052,783.27
Little Sioux, N. J.....	Camp Alfred Vail.....	Nov. 19, 1917	(1)	.....	1,833,826.87	1,833,826.87
Louis, Ark.....	Eberis Field—flying, training.....	Dec. 3, 1917	(1)	.....	1,902,473.76	1,893,988.94
London, Ark.....	Chapman Field.....	May 29, 1918	(1)	.....	1,320,938.63	1,320,938.63
Madison, Va.....	Supply depot.....	Aug. 1, 1917	(1)	.....	2,544,411.83	2,525,721.80
Middleton, Tenn.....	Park Field—flying, training.....	Sept. 15, 1917	(1)	.....	2,180,516.94	2,180,516.94
Minneapolis, Minn.....	Dunwoody Institute, school.....	July 18, 1917	(1)	.....	5,810,341.07	5,720,216.37
Minneapolis, Long Island, N. Y.....	Hazelhurst Field.....	July 18, 1917	(1)	\$360,310.80	.....	.....
Montgomery, Ala.....	Taylor Field—flying, training.....	Dec. 15, 1917	(1)	.....	1,320,268.63	1,285,724.47
Morrison, Va.....	General supply depot.....	Sept. 10, 1917	(1)	.....	2,190,043.26	2,129,909.57
Mount Clemens, Mich.....	Selfridge Field—flying, training.....	June 1, 1917	(1)	.....	2,483,414.46	2,474,216.16
Panama Canal.....	France Field.....	.....	(1)	.....	335,400.00	335,400.00
Rantoul, Ill.....	Chanute Field—flying, training.....	May 28, 1917	(1)	.....	1,215,323.10	1,213,866.00
Richmond, Va.....	General supply depot.....	Aug. 10, 1917	(1)	.....	1,164,713.62	1,160,552.58
Riverside, Calif.....	March Field—flying, training.....	Mar. 2, 1918	(1)	.....	994,123.77	978,165.90
Rochester, N. Y.....	Photo school.....	Jan. 31, 1918	(1)	.....	69,777.98	69,188.64
Sacramento, Calif.....	Mather Field—flying, training.....	Mar. 14, 1918	(1)	.....	940,776.26	831,102.19
San Antonio, Tex.....	Kelly Field—flying, training.....	July 23, 1917	(1)	.....	4,483,757.43	4,473,002.86
Do.....	Brooks Field—flying, training.....	Dec. 15, 1917	(1)	.....	1,448,381.16	1,442,673.85
Do.....	Camp John Wise.....	May 29, 1918	(1)	.....	279,153.09	278,992.97
San Diego, Calif.....	Rockwell Field, flying.....	Feb. 28, 1918	(1)	(1)	1,448,381.16	1,442,673.85
St. Paul, Minn.....	Mechanics school.....	.....	(1)	.....	976,626.64	976,626.64
Waco, Tex.....	Rich Field—flying, training.....	Aug. 25, 1917	(1)	.....	1,166,439.08	1,164,305.66
West Point, Miss.....	Payne Field—flying, training.....	Mar. 26, 1918	(1)	.....	1,486,321.50	1,463,378.75
Wichita Falls, Tex.....	Call Field—flying, training.....	Sept. 6, 1917	(1)	.....	1,259,063.92	1,264,645.49
Lee Hall, Va.....	Balloon school.....	.....	(1)	90,000.00	833,830.00	833,830.00

1 Included in Southern Fields.
2 No contract.

3 Construction included in Hazelhurst Field.
4 Not purchased; Government land.

5 Acquired under condemnation proceedings.
6 Not yet adjusted.

Location.	Class or character.	Balance due.	Officer in charge July 15, 1919.	Remarks.
Americus, Ga.	Souther Field—flying training.	\$16,245.93	I. A. Rader, lieutenant colonel.	
Do.	General supply depot.	9,080.92	do.	
Anacostia, D. C.	Bolling Field, flying.		R. D. Harts, lieutenant colonel.	
Arcadia, Fla.	Carlstrom Field, flying.	38,106.63	T. Duncan, lieutenant colonel.	
Do.	Do.		do.	
Arcadia, Calif.	Dorr Field, flying.		L. J. Mygott, lieutenant colonel.	Alterations.
Baltimore, Md.	Johns Hopkins University, training school.	1,108.09	Closed.	Do.
Bellview, Ill.	Scott Field, flying field.	11,059.00	Henry Abbey, major.	
Brooklyn, N. Y.	Pratt Institute, training school.	435.51	Closed.	
Buffalo, N. Y.	Acceptance Park, testing field.		G. G. Scarlett, first lieutenant.	
Chicago, Ill.	Grant Park steel hangar.		J. P. Morrow, colonel.	
Dallas, Tex.	Love Field—flying, training.	9,681.71	H. P. Burwell, lieutenant colonel.	13 acres purchased May 10, 1919 because of septic tank.
Do.	Repair depot.			
Do.	Camp Dick, gunnery school.	7,699.31	D. B. Netherwood, lieutenant colonel.	Alterations.
Dayton, Ohio.	McCook Field, experimental.		T. H. Bane, colonel.	
Do.	Acceptance Park, testing field.	13,040.10	J. P. Caffrey, captain.	
Detroit, Mich.	Saxon Motor plant, warehouse.		Closed.	Construction done by Supply Section division Military Aeronautics.
Do.	Acceptance Park, testing field.			Contract made by Construction Division.
Elizabeth, N. J.	do.		A. J. Ballinger, first lieutenant.	Do.
Eslington, Pa.	Chandler Field, flying.	471.87	do.	Do.
Fairfield, Ohio.	Wilbur Wright Field, flying.	68,741.35	P. A. Olive, major.	
Do.	Gunnery School, Wilbur Wright.	703.77	do.	
Do.	Supply Depot.	27,042.51	J. P. Caffrey, captain.	
Fayetteville, N. C.	Camp Bragg.		B. J. Saunders, captain.	Do.
Fort Omaha, Neb.	Balloon School, training.	2,075.31	J. W. West, lieutenant colonel.	
Fort Sam Houston, Tex.	Storehouse.	24,078.94	W. M. Garrison, major.	
Fort Worth, Tex.	Talalero Field.	26,508.82	Carl Spatz, major.	
Do.	Barron Field—flying, training.	39,583.91	J. B. Edgerly, major.	
Do.	Langley Field—flying, training.	65,492.63	T. J. Hanley, major.	
Do.	Ford Island, seaplane station.		W. M. Hensley, colonel.	
Hampton, Va.	Fort Kamehameha.		J. B. Brooks, major.	
Hawaiian Islands.	do.		do.	
Houston, Tex.	Ellington Field—flying, training.	21,396.86	L. W. McIntosh, lieutenant colonel.	
Fort Sill, Okla.	Pett Field—flying, training.	28,648.32	R. R. Barnitz, lieutenant colonel.	
Do.	Balloon school.		do.	
Indianapolis, Ind.	Engine repair depot.		Patrick Frissel, major.	
Lake Charles.	Gastner Field—flying, training.		W. W. Wynne, major.	
Little Rock, Ark.	Aviation general supply depot.	84,977.40	G. W. DeArmond, lieutenant colonel.	Do.
Little Silver, N. J.	Camp Alfred Vail.		Closed.	
Lomoke, Ark.	Eberts Field—flying, training.	8,484.82	A. N. Krogstad, major.	

1 Land and building owned by State

2 On filled land owned by Government.

3 Included in Souther Field.

Construction at Air Service stations—Continued.

Location.	Class or character.	Balance due.	Officer in charge July 15, 1919.	Remarks.
Miami, Fla.	Chapman Field.		F. T. Madigan, second lieutenant.	
Middletown, Pa.	Supply depot.	\$18,690.03	R. C. Kirtland, lieutenant colonel.	
Millington, Tenn.	Park Field—flying, training.		I. W. Simons, major.	
Minneapolis, Minn.	Dunwoody Institute, school.		Closed.	Alterations.
Muncola, Long Island, N. Y.	Hazelhurst Field.	90,124.70	Archibald Miller, colonel.	
Do.	Mitchell Field.			
Montgomery, Ala.	Taylor Field—flying, training.	32,034.16	Seth W. Cook, lieutenant colonel.	
Morrison, Va.	General supply depot.	60,133.39	C. H. Bonesteel, major.	
Mount Clemens, Mich.	Selbridge Field—flying, training.	9,198.30	D. Johnson, lieutenant colonel.	
Panama Canal.	France Field.		M. F. Harmon, lieutenant colonel.	
Rantoul, Ill.	Chanute Field—flying, training.	1,337.10	Ira H. Longenecker, lieutenant colonel.	
Richmond, Va.	General supply depot.	4,161.04	C. V. Stalze, captain.	
Riverside, Calif.	March Field—flying, training.	15,957.78	J. C. P. Barthold, major.	
Rochester, N. Y.	Photo school.	579.34	Closed.	Do.
Sacramento, Calif.	Mather Field—flying, training.	9,674.07	R. L. Watson, lieutenant colonel.	
San Antonio, Tex.	Kelly Field—flying, training.	10,154.57	B. G. Buttler, lieutenant colonel.	
Do.	Brooks Field—flying, training.	5,707.31	D. H. Bower, lieutenant colonel.	
Do.	Camp John Wise.	160.12	Closed.	
San Diego, Calif.	Rockwell Field, flying.	5,707.31	A. J. Hanlon, lieutenant colonel.	
St. Paul, Minn.	Mechanics school.		H. P. Wehrle, major.	Do.
Waco, Tex.	Rich Field, flying training.	2,133.42	J. J. Whiteside, major.	
West Point, Miss.	Payne Field—flying, training.	22,942.75	W. W. Howard, major.	
Wichita Falls, Tex.	Call Field—flying, training.	22,418.43	C. W. Russell, major.	
Lee Hall, Va.	Balloon school.			

Mr. FREAR. The next exhibit which I have to offer is entitled "Summary of contracts, United States Spruce Production Corporation." That we asked for in question 6 on June 23, and it provides, first, the name of the contractor, and then the address, and then the date, and then the amount, and then the kind of lumber, and so on. This relates entirely, as I take it, to the spruce item; it does not relate to any other expenditures, for railways or anything of the kind, that were constructed. The general purpose was to include all expenditures, and I wonder if you could furnish us, in addition to that statement—and I did not discover until now that it was lacking—I wonder if you could furnish not only what was in the spruce-production contract; not only the spruce material alone, because that does not cover anywhere near the expenditures in the western section, and the committee expects to conduct some investigation there—but all expenditures out there?

Gen. MENOHER. I can not right offhand say whether it does or does not include all expenditures.

Mr. FREAR. I have the totals of the various subjects but they are not itemized in this way. I thought they would be of some value to us if we could get them in that way. Outside of strictly spruce production if we could have the items of expense that are given under these various items mentioned in the next statement, so far as could be furnished, it would be of value to us.

Gen. MENOHER. We will furnish that. Is there any limit?

Mr. FREAR. Yes; \$100,000 would continue to be the limit. I would like to have this paper introduced in evidence and marked "Exhibit No. 104. (Gen. Menoher, Exhibit E.)"

(The paper referred to, composed of 5 sheets of a photostatic copy of statement entitled "Summary of contracts," is here printed in full in the record as follows:)

EXHIBIT No. 104. (GEN. MENOHER, EXHIBIT E.)

WAR DEPARTMENT,
OFFICE OF THE DIRECTOR OF AIR SERVICE,
Washington, July 30, 1919.

HON. JAMES A. FREAR, *Capitol*.

DEAR Mr. FREAR: In response to No. 6 of your questionnaire of June 23, I hand you herewith data on contracts taken over or entered into by the United States Spruce Production Corporation, together with a statement of cash receipts and disbursements of that corporation as of June 30, 1919.

I understood from our conversation of last Saturday that this data, for the present, will suffice for this question (No. 6), and that you will notify me if you later desire data on hardwood contracts.

Very truly, yours,

DAVID S. SEATON,
Captain, A. S. M. A., Liaison Officer.

Summary of contracts—United States Spruce Production Corporation.

Contractor.	Contract.		Amount.	Kind of lumber.	Lumber furnished.			Payments made.
	Address.	Date.			Kind.	Quantity.	Rate.	
C. P. Adams Lumber Co.....	Aberdeen, Wash.....	Dec. 27, 1917	<i>Fed.</i> 2,000,000	Spruce.....	Airplane..... Sawn cants..... Reinforcements.....	<i>Fed.</i> 625,082 73,980 71,536	\$105 per thousand feet.	{ \$73,820.65 8,803.92
Aloha Lumber Co.....	Aloha, Wash.....	Nov. 1, 1917	8,000,000	do.....	Airplane..... Sawn cants..... Reinforcements.....	1,043,987 1,847,488 338,689	\$105 per thousand feet.	{ 58,153.40 141,202.94
Aircraft Lumber Co.....	Seattle, Wash.....	Sept. 10, 1918			Logging of Gov. ernment land and stumpage. (Rived cants..... Logs..... None.....)	None.		{ 18,768.26
Airplane Spruce & Lumber Co.....	Hoquiam, Wash.....	Jan. 23, 1918		Spruce cants and logs.....	(Rived cants..... Logs..... None.....)	1,277,340 11,086,549	Cost plus 7 per cent.	{ 11,379,881.61
Anderson & Peterson.....	Skamokawa, Wash.....	Oct. 4, 1918	200,000	Rived spruce.....	None.....			{ None.
Anacortes Lumber & Box Co.....		Nov. 1, 1917	900,000	Spruce.....	Airplane..... Sawn cants..... Reinforcements.....	1,027,182 1,497,227 1,256,781	\$105 per thousand feet.	{ 96,606.83 111,252.12
J. G. Arnold & Co.....	Myrtle Point, Oreg.....	Sept. 27, 1918	3,000,000	Rived cedar.....	None.....			{ None.
Frank Astman.....	Rockaway, Oreg.....	Jan. 19, 1918	1,000,000	Rived spruce.....	Airplane..... Sawn cants..... Reinforcements.....	162,024 856,860 1,330,409	\$90 with \$40 bonus.	{ 21,063.12
Astoria Box Co.....	Astoria, Oreg.....	Nov. 1, 1917	9,900,000	Spruce.....	Airplane..... Sawn cants..... Reinforcements.....	1,669,013 26,083 161,776	\$105 per thousand feet.	{ 73,029.83 94,183.59
Balmer, Balmer & Hodge.....	Tillamook, Oreg.....	Oct. 3, 1918	100,000	Rived spruce.....	None.....			{ None.
A. G. Beals.....	do.....	Nov. 1, 1917	120,000	Spruce.....	Airplane..... Sawn cants..... Reinforcements.....	239,239 601,089 23,961	\$80 with \$40 bonus.	{ 3,390.79 13,013.89
Bear River Spruce Co.....	Portland, Oreg.....	Aug. 21, 1918	7,500,000	Rived spruce.....	Airplane..... Sawn cants..... Reinforcements.....	1,844,374 1,617,794 1,992,810	\$105 per thousand feet.	{ 18,506.49 46,430.46
Bloedel Donovan Lumber Mills.....	Bellingham, Wash.....	Nov. 1, 1917	150,000	Spruce.....	None.....			{ None.
H. A. Brewer.....	Portland, Oreg.....	Jan. 7, 1918	200,000	do.....	Airplane..... Sawn cants..... Reinforcements.....	1,844,374 1,617,794 1,992,810	\$105 per thousand feet.	{ 133,623.29 120,926.93
Brighton Mills Co.....	Brighton, Oreg.....	Nov. 1, 1917	9,000,000	do.....	Reinforcements..... Pd. in Washing..... Rived cedar.....	510,762 215,675 None.	\$90 with \$40 bonus.	{ 27,225.99
Beckham & Hinkle.....	Coquille, Oreg.....	May 9, 1918	150,000	Rived cedar.....	Split spruce logs.....	106,722	\$90 grade 1, \$45 grade 2.	{ 9,472.16
C. L. Buckbee.....	Cloverdale, Oreg.....	Mar. 22, 1918	20,000	Rived spruce.....	Airplane..... Sawn cants..... Reinforcements.....	121,048 757,193 422,425	\$175 grade A, \$90 grade B, \$45 grade C.	{ 2,695.30 31,987.25
Carrier Haught Co.....	Centralia, Wash.....	Apr. 22, 1918	1,000,000	Split spruce logs.....	Rived cedar.....	422,425	\$90 with \$40 bonus.	{ 52,390.21
Clatsop County Co.....	Astoria, Oreg.....	Oct. 8, 1918	6,200,000	Spruce.....	None.....			{ None.
Coats & Donald.....	Myrtle Point, Oreg.....	July 17, 1918	250,000	Rived cedar.....	Airplane..... Sawn cants..... Reinforcements.....	1,127,991 1,520,969 106,089	\$105 per thousand feet.	{ 91,755.56 107,946.01
J. H. Cogan.....	Ecola, Oreg.....	Jan. 17, 1918	500,000	Spruce.....	None.....			{ None.
Columbia Box & Lumber Co.....	South Bend, Wash.....	Nov. 1, 1917	1,500,000	do.....	Airplane..... Sawn cants..... Reinforcements.....	1,127,991 1,520,969 106,089	\$105 per thousand feet.	{ 91,755.56 107,946.01

H. C. Copeland.....	Joyce, Wash.....	Mar. 28, 1918	100,000	Rived spruce.....	Rived spruce.....	30,820	\$90, with \$40 bonus.....	4,006.06
Copalis Lumber Co.....	Carlisle, Wash.....	Nov. 1, 1917	1,800,000	Spruce.....	Airplane.....	615,826	\$105 per thousand feet.....	61,886.33
Craig Lumber Co.....	Craig, Alaska.....	Jan. 8, 1918	100,000	do.....	Reinforcements.....	1,516,301	do.....	118,640.30
Do.....	do.....	Sept. 7, 1918	1,000,000	(1) Rived spruce.....	Airplane.....	71,928	do.....	5,417.78
Crawford & Newnam.....	Hoquiam, Wash.....	Feb. 1, 1918	1,000,000	Rived spruce.....	Sawn canis.....	752,862	(1) \$80, with \$40 bonus.....	69,326.79
C. Bystrom.....	Seattle, Wash.....	May 25, 1918	1,000,000	do.....	(1) Rived spruce.....	158,283	\$80, with \$40 bonus.....	20,574.19
Lester W. David.....	do.....	Aug. 1, 1918	(1)	do.....	Logs.....	646,521	\$10 per thousand feet.....	73,517.73
Do.....	do.....	Aug. 1, 1918	(1)	do.....	Sawn canis.....	212,166	\$8 per thousand feet.....	1,510.40
Ernst Dodge.....	Tacoma, Wash.....	Nov. 1, 1917	1,500,000	Spruce.....	Drying logs.....	7,430,207	\$4 per thousand feet.....	4,550.28
Donovan Lumber Co.....	Aberdeen, Wash.....	do.....	2,250,000	do.....	Airplane.....	125,283	\$105 per thousand feet.....	13,341.18
H. H. Dufort.....	Bandon, Oreg.....	Apr. 30, 1918	250,000	Rived cedar.....	Reinforcements.....	120,700	\$105 per thousand feet.....	14,550.84
E. Dyer.....	Cedar Point, Oreg.....	Mar. 20, 1918	250,000	do.....	Airplane.....	26,947	\$105 per thousand feet.....	125,915.87
Do.....	do.....	Apr. 30, 1918	250,000	do.....	Sawn canis.....	1,702,847	\$90, with \$40 bonus.....	141,477.73
L. R. Edmundson & Co.....	Portland, Oreg.....	June 21, 1918	3,000,000	do.....	Reinforcements.....	2,205,441	\$130 per thousand feet.....	19,795.28
Ewall-Loomis Lumber Co.....	Humtuplups, Wash.....	Nov. 1, 1917	450,000	Spruce.....	Rived cedar.....	154,096	None.....	24,305.97
O. C. Fensleson.....	Portland, Oreg.....	Dec. 1, 1917	1,000,000	Rived spruce.....	do.....	186,890	None.....	None
Do.....	do.....	Oct. 3, 1918	180,000	do.....	Airplane.....	428,086	\$105 per thousand feet.....	47,824.04
Fishpoint Logging Co.....	Brookfield, Wash.....	Apr. 12, 1918	(1)	do.....	Reinforcements.....	21,857	\$90, with \$40 bonus.....	3,008.34
F. L. Fletcher.....	Hoquiam, Wash.....	Apr. 14, 1918	250,000	Rived spruce.....	Rived spruce.....	47,037	None.....	6,114.81
Fyle-Wilson & Co.....	Bandon, Oreg.....	Sept. 3, 1918	1,000,000	Rived cedar.....	Rived spruce.....	2,458,580	\$10 per thousand feet.....	20,141.47
Grant Smith, Porter Bros.....	Portland, Oreg.....	Dec. 28, 1917	(1)	Spruce canis and logs.....	Rived cedar.....	136,536	\$80, with \$40 bonus.....	18,011.30
Grays Harbor Commercial Co.....	Cosmopolis, Wash.....	Sept. 10, 1918	(1)	do.....	Rived canis.....	216,293	do.....	27,668.15
Frank Gustis.....	Nehalem, Oreg.....	Mar. 30, 1918	240,000	Rived spruce.....	Logs.....	5,840,481	Cost plus 7 per cent.....	12,807,699.47
Hammond Lumber Co.....	Portland, Oreg.....	July 31, 1918	60,000,000	Spruce logs.....	Logs sawed.....	17,984,778	\$12 per thousand feet, subject to adjustment.....	5,915.65
Chas. H. Hannan.....	South Bend, Wash.....	Oct. 1, 1918	500,000	Logging of Government land and stumpage.....	Rived spruce.....	3,623,774	\$90, with \$40 bonus.....	6,660.53
Hannify Lumber Co.....	Raymond, Wash.....	May 15, 1918	1,200,000	Fir.....	Spruce logs.....	51,281	\$40 per thousand feet; profit not to exceed \$2.50 per thousand.....	500,000.00
Edgar Hannan.....	Eugene, Oreg.....	Mar. 13, 1918	20,000	Rived cedar.....	do.....	4,410,224	None.....	None
H. H. & S. Lumber Co.....	Humtuplups, Wash.....	Jan. 7, 1918	500,000	Spruce.....	Fir.....	None	\$50 per thousand feet.....	27,625.50
A. I. Houghtaling.....	Seaside, Oreg.....	Jan. 26, 1918	450,000	do.....	Rived cedar.....	552,510	\$80, with \$40 bonus.....	20,091.49
Do.....	do.....	do.....	900,000	Rived spruce.....	(Airplane).....	160,173	\$105 per thousand feet.....	14,825.48
Hoquiam Spruce Co.....	Hoquiam, Wash.....	Sept. 10, 1918	5,000,000	Government lands and stumpage.....	Sawn canis.....	153,470	None.....	50,394.10
					None.....	763,433	None.....	None
					None.....	None	None.....	None
					None.....	None	None.....	None

* 1 carload.
* Logging Government lands and stumping.

* Sawing Government logs.
* Sawing and drying logs.

1 To Dec. 31, 1918.
* Canceled; see above.

Summary of contracts—United States Spruce Production Corporation—Continued.

Contractor.	Contract.		Amount.	Kind of lumber.	Lumber furnished.			Payments made.
	Address.	Date.			Kind.	Quantity.	Rate.	
H. H. & S. Lumber Co.	Humtulls, Wash.	Sept. 16, 1918	<i>Fed.</i> 1,500,000	Spruce canis.	Sawn spruce canis.	<i>Fed.</i> 762,433	\$90 grade 1. \$50 grade 2. \$30 grade 3. \$90 with \$40 bonus.	\$50,384.10
W. R. Johnson.	Raymond, Wash.	May 22, 1918	60,000	Rived spruce.	Rived spruce.	102,912		13,378.56
Johnson & Hopson.	Portland, Oreg.	Feb. 16, 1918	3,000,000	do.	do.	None.		None.
Liberty Spruce & Pulp Co.	Wilmington, Del.	Oct. 7, 1918	4,000,000	Sawn spruce canis.	do.	None.		None.
Moore Mill & Lumber Co.	Bandon, Oreg.	Nov. 1, 1917	2,800,000	Spruce.	Airplane.	1,820,250		196,922.58
Edward Murphy.	Portland, Oreg.	July 1, 1918		Logging of Government land and stumpage.	Sawn canis.	100,025	\$105 per thousand feet.	12,366.92
					Reinforcements.	91,106	Cost plus 50 cents per thousand feet.	229,224.98
J. Canby Morgan.	do.	Jan. 9, 1918	200,000	Fir.	Fir.	12,465	\$55 per thousand feet.	656.62
Do.	do.	Feb. 15, 1918	300,000	do.	do.	None.		None.
Archib. McLaughlin.	Wheeler, Oreg.	Jan. 29, 1918	40,000	Rived spruce.	Rived spruce.	5,339	\$90 with \$40 bonus.	694.07
McNeill-O'Hearne Co.	Port Angeles, Wash.	Mar. 21, 1918	300,000	do.	do.	176,667	do.	22,966.71
North Bend Mill & Lumber Co.	North Bend, Oreg.	Nov. 1, 1917	1,000,000	Spruce.	Airplane.	804,578	\$105 per thousand feet.	59,519.47
Northwestern Lumber Co.	Hoquiam, Wash.	do.	3,900,000	do.	Sawn canis.	1,717,877	do.	57,186.18
Olympic Spruce Lumber Co.	Seattle, Wash.	Dec. 14, 1917	100,000	do.	Sawn canis.	656,244	do.	46,407.80
Oregon Pacific Mill & Lumber Co.	Astoria, Oreg.	Dec. 22, 1917	10,000,000	do.	Reinforcements.	124,443	do.	18,455.20
Palmer Logging Co.	do.	July 1, 1917	12,000,000	Logging of Government land and stumpage.	Airplane.	133,973	do.	92,483.20
					Sawn canis.	2,421,877	do.	181,175.81
						1,884,248	\$26.75 grades 1 and 2, \$9 grade 3.	47,709.62
Portland Lumber Co.	Portland, Oreg.	Sept. 10, 1918		do.		None.	Cost plus \$1 per thousand feet.	219,917.11
Port Orford Mills.	do.	Jan. 7, 1918	450,000	Spruce.	Airplane cedar.	16,861	\$105 per thousand feet.	2,266.94
Quinnault Lumber Co.	Raymond, Wash.	Nov. 1, 1917	3,800,000	Spruce.	Airplane.	538,121		41,807.19
R. D. Spruce Co.	do.	May 22, 1918	300,000	Rived spruce.	Sawn canis.	1,481,965	\$105 per M.	118,667.71
Rowe & White Log Co.	Aberdeen, Wash.	Oct. 7, 1918	3,300,000	Logging of Government land and stumpage.	Reinforcements.	275,999	\$90 with \$40 bonus.	19,646.44
					Rived spruce.	182,742	\$25 per M for grade 1, grade 2: \$8 per for grade 3.	1,879.44
Carl Schutte.	Portland, Oreg.	Jan. 29, 1918	5,000,000	Rived spruce.		389,224		None.
Stevens, (care of C. A. Schmitt)	Seattle, Wash.	May 12, 1918	250,000,000	Sawn spruce canis.		None.		None.

Siler Mill Co.	Raymond, Wash.	Apr. 1, 1918	4,800,000	Spruce	Airplane. Sawn cants. Reinforcements	1,507,437 3,418,185 440,644	\$105 per M.	{ 120,042.35 254,530.25
Silver Spruce Co.	Bay City, Oreg.	{Nov. 1, 1917 Sept. 25, 1918	3,800,000 1,800,000	Spruce Fir	Airplane. Sawn cants. Reinforcements	1,777,665 16,757 144,361	\$105 per M.	{ 128,587.70 1,182.73 None.
Sitka Spruce Co.	Coquille, Oreg.	Nov. 1, 1917	5,400,000	Spruce	Airplane. Sawn cants. Reinforcements	3,783,006 27,480 361,624	\$105 per M.	{ 341,188.31 2,148.79
Solon Schiffman Sprague & Soule	Bay City, Oreg. Carlisle, Wash.	do. Oct. 1, 1918	720,000 3,000,000	do. Logging of Govern- ment land and stumpage.	Airplane. Reinforcements	52,279 4,657 None.	do.	{ 4,762.58 None.
A. P. Stockwell Lumber Co.	Copalis, Wash.	Jan. 28, 1918	1,000,000	Spruce	Airplane.	81,902	\$105 per M.	{ 948,956.94
C. F. Stone.	Tillamook, Oreg.	Jan. 10, 1918	500,000	Rived spruce.	Sawn cants.	26,465	\$80 with \$40 bonus	{ 37,278.15
Thorsen Hendricksen Lumber Co.	Portland, Oreg.	Jan. 14, 1918	10,000,000	Spruce	Airplane.	280,583 107,390	\$105 per M.	{ 7,246.23
Veness & Malone.	Olney, Oreg.	July 1, 1918	12,000,000	Logging of Govern- ment lands and stumpage.		1,897,737	\$20 per M, grade 1 and 2; \$8 per M grade 3.	{ 117,364.06
Warren Scott Co.	Seaside, Oreg.	Feb. 1, 1918	6,000,000	Rived spruce.	Rived spruce.	398,282	\$80 with \$40 bonus	{ 46,040.48
Warren Spruce Co.	Portland, Oreg.	Jan. 11, 1918		Spruce cants and logs.	Cants. Logs	4,714,871 19,483,870	Cost plus 7 per cent.	{ 14,366,075.26
Wheeler Lumber Co.	Wheeler, Oreg.	Nov. 1, 1917	1,500,000	Spruce	Airplane. Sawn cants.	1,112,962 1,367,183	\$105 per M.	{ 47,931.87 89,134.19
White River Lumber Co.	Enumclaw, Wash.	{Aug. 1, 1918 July 1, 1918	169,669	Sawing of Government logs. do.	Reinforcements	79,142 2,155,406	\$9 per M.	{ 11,983.22
Willapa Lumber Co.	Raymond, Wash.	{Nov. 1, 1917 Feb. 5, 1918	5,400,000	Spruce	Airplane. Sawn cants.	1,988,973 2,220,329	do.	{ 1,681.44 175,809.25
Fred Wilson	Hoquiam, Wash.	Sept. 10, 1918	4,300,000	Total output cants. Logging of Govern- ment land and stumpage.	Reinforcements Cants.	5,660,706 464,601	\$105 per M.	{ \$274,054.05
William E. Warren. Willamette Valley Stock & Land Co.	Astoria, Oreg. Corvallis, Oreg.	{Nov. 27, 1918 Nov. 1, 1917	980,000 2,700,000	Spruce	Airplane.	5,660,706 None. None.		{ \$274,054.05 None. 36,777.12

* Above payment includes total amount paid for all operations, including railroad construction and purchase of equipment.

1 To Dec. 31, 1918.

Summary of contracts—United States Spruce Production Corporation—Continued.

Contractor.	Contract.		Amount.	Kind of lumber.	Lumber furnished.			Payments made.
	Address.	Date.			Kind.	Quantity.	Rate.	
Yaquina Bay Ry. & Lumber Co.	Toledo, Oreg.	May 25, 1918	<i>Fed.</i>	Sawing of Government logs.	Logs sawed.	<i>Fed.</i> 81,274,812	\$9 per thousand feet.	\$11,473.34
Younans & Thomas.	Portland, Oreg.	Jan. 23, 1918	4,500,000	Rived spruce.	Rived spruce.	292,139	\$90, with \$40 bonus.	37,879.69
Carl R. Schotte.	do.	June 4, 1918	3,500,000	Spruce logs.	Spruce logs.	None.	None.	None.
Donovan Lumber Co.	Aberdeen, Wash.	Oct. 21, 1918		Sawing of Government logs.	Logs sawed.	813,626	\$12 per thousand feet (subject to adjustment).	1,150.66
Hammond Lumber Co.	Portland, Oreg.	Sept. 24, 1918		do.	do.	1,348,129	\$8 per thousand feet for sawing; \$3 per thousand feet for drying.	\$12,253.24
White River Lumber Co.	Enumelaw, Wash.	Oct. 15, 1918		do.	do.	1,145,250	\$12 per thousand feet (subject to adjustment).	1,809.84
Willapa Lumber Co.	Raymond, Wash.	Sept. 28, 1918		do.	do.	4,552,284	do.	17,113.84

To Dec. 31, 1918.

To Jan. 8, 1918.

Mr. FREAR. Let me ask you: The Spruce Production Department or the Spruce Production Corporation is an independent corporation, is it not?

Gen. MENOHER. Yes, sir.

Mr. FREAR. They furnish the spruce for airplane purposes?

Gen. MENOHER. Yes, sir.

Mr. FREAR. You have no original record here in regard to their contract?

Gen. MENOHER. No, sir.

Mr. FREAR. They are all in Portland, Oreg., I understand?

Gen. MENOHER. The headquarters of the corporation is at Portland, Oreg.

Mr. FREAR. And if this committee desires to have any explanation of other contracts, or of any expenditures made by the Spruce Production Division—

Gen. MENOHER (interposing). By the Spruce Production Corporation, you mean. There is a distinction between the Spruce Production Division, which it was called originally, and the Spruce Production Corporation. When the Spruce Production Corporation was organized, the Spruce Production Division's activities were transferred and all its operations transferred to the corporation.

Mr. FREAR. And if this committee desires to secure any information regarding expenditures of the Spruce Production Division, as it was originally, or of the Spruce Production Corporation, as it has since been, it will be necessary for us to either visit Portland, Oreg., or have all those original records and some of their people brought on here?

Gen. MENOHER. Yes, sir; exactly.

Mr. FREAR. That was the statement made recently in your letter, and the statement that has been made before the committee on several occasions?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The next statement I desire to offer for the record, and which I desire marked "Gen. Menoher, Exhibit No. 105," purports to give the United States Spruce Production Corporation cash receipts and disbursements up to June 30, 1919. A part of it is brief, and I will read that part which relates to receipts:

Sale of debenture bonds reached \$21,500,000. Capital stock, \$100,000. Commercial lumber sales \$579,000, in round numbers. Aircraft lumber sales \$5,000,000, in round numbers. Salvage sales \$1,926,966, or practically \$2,000,000.

Have you any data showing what the salvage sales consisted of?

Gen. MENOHER. Machinery of various kinds, logging plants, and so on, but I understand mostly machinery.

Mr. FREAR. We will get all of that data there.

Gen. MENOHER. Yes, sir; it should all be complete there. Among that lumber, although that would not be considered salvage, I believe, were side cuts.

Mr. FREAR. Yes; I have read that— \$529,000 commercial lumber sales.

Gen. MENOHER. Yes, sir.

Mr. FREAR. Then we have deposits on rejected bids, and so on, making a total of \$31,782,700.

The next item is, less cash on hand July 30, 1919, \$10,517,000, in round numbers, leaving total expenditures by the corporation to June 30, 1919, \$21,265,217.

Then we have unpaid vouchers in process, \$368, and expenditures by B. A. P. and Signal Corps prior to that corporation. That would be the spruce division?

Gen. MENOHER. Yes, sir.

Mr. FREAR. That is \$27,497,240. About what time was the Spruce Corporation organized, or did it take charge, if you can remember readily?

Gen. MENOHER. That was in September, I think.

Mr. FREAR. September, 1918?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And so the expenditures prior to that time, of \$27,497,240, were made under the Spruce Production Division?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The total expenditures for the Spruce Production Corporation, according to this statement, reached \$48,762,826; and, as you have stated, the contracts and all vouchers and other papers for these expenditures are in Portland, Oreg.?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The next page is an abstract of expenditures of the United States Spruce Production Corporation. That does not include expenditures made before that, and I am not going into these items very completely but will suggest some things that appear here. The first item is \$740,725, for lands and timber lands. Do you know what lands that refers to?

Gen. MENOHER. I can not tell you.

Mr. FREAR. I assume it is the Blodgett contract, but we will go into that later.

Gen. MENOHER. I really do not know about that.

Mr. FREAR. The next item I am inquiring about is an item for railroad equipment, \$1,111,609.83. That was for locomotives, undoubtedly, and general equipment that would go to make up rolling stock and the general usefulness of the railroad. You have no means of determining how that was divided among the three railroads?

Gen. MENOHER (interposing). I can not answer that definitely. I have no means of reaching that here at present, and I doubt if there is any information on that in my office.

Mr. FREAR. We will probably have to get that from their office at Portland, Oreg.?

Gen. MENOHER. Yes, sir; I think so.

Mr. FREAR. In view of what is known of the Seims-Carey-Kerbaugh road, which was built out from Lake Pleasant, a 38-mile branch—the longest road and the most expensive road—and the most complete road of all the roads, because the other two were short branches, comparatively speaking, down in Oregon?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The largest part of that expenditure, presumably, would go into that upper road?

Gen. MENOHER. Presumably, but I do not know.

Mr. FREAR. I am trying to get at it, generally speaking?

Gen. MENOHER. Yes, sir; all things being equal that would be true.

Mr. FREAR. Yes, sir; all things being equal it would seem to be about one-half, on account of the way it was built?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The next item I call your attention to is, construction of railroad, \$659,015.12. You have no idea, of course, to what roads that amount would be distributed?

Gen. MENOHER. No, sir.

Mr. FREAR. And the Clallam County operations, that does not indicate whether railroads or not?

Gen. MENOHER. No, sir.

Mr. FREAR. The next item is for spruce production down in Oregon as I understand, Grant Smith-Porter Bros. Co., and the amount reaches, on their contract, \$3,000,000.

The next item I speak of is the Siems-Carey-Kerbaugh Corporation, which had a spruce contract for 250,000,000 feet of timber, and also to build a railroad—that 38-mile branch. This spruce item reaches \$14,341,147.85.

The next item is for the Siems-Carey-Kerbaugh Railroad. That reaches \$3,988,511.93.

The Vancouver cut-up plant, following, is \$1,975,534.

The Warren Spruce Co., further down on the same page, receives advances on contract, \$600,000.

The next item after that is, \$500,000 for the Siems-Carey-Kerbaugh Corporation. That presumably would be added to the \$3,988,000 which previously appears for the Siems-Carey-Kerbaugh railroad contract, would it not?

Gen. MENOHER. Yes; presumably so, but I can not say definitely on that. You say that is an advance, and it is possible that that may be charged against that railroad.

Mr. FREAR. Would that be possible in view of the method of totaling which you have at the conclusion?

Gen. MENOHER. No; it would not.

Mr. FREAR. So that is an extra payment and an extra advance made, in addition to the other amount?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The Siems-Carey-Kerbaugh spruce contract received \$750,000 of advances, in addition to the amount previously read, of over \$4,000,000?

Gen. MENOHER. I do not know.

Mr. FREAR. I wish to just get a brief understanding of the character of these contracts. On the next page there is a small item to the Siems-Carey-Kerbaugh Corporation of \$62,290; that is rather a small item, comparatively speaking.

As to the abstract of expenditures, there are about, I would say, maybe 200 items or more on this list, and it totals \$48,762,826.

The expenditures credited to the Siems-Carey-Kerbaugh Corporation directly for railroads would be \$4,488,511.93.

Gen. MENOHER. Yes, sir.

Mr. FREAR. Then, whatever proportion of the \$1,111,609, which was previously mentioned for equipment, to be credited to the Siems-Carey-Kerbaugh railroad, would necessarily add to this amount in order to find out the cost of the railroad running from Lake Crescent to Lake Pleasant?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Assuming for the sake of argument that it reaches the sum—well, one-third, well of course that railroad must take more than

that proportion—that would be \$3,700,000, in round numbers. I want to find the aggregate, if I can, at this point here for the Siems-Carey-Kerbaugh railway.

Mr. LEA. That would be only speculative.

Mr. FREAR. Yes; I concede that, and unless it reaches far more than that amount I shall be greatly surprised, in view of the different types of railroads that have been built there.

Mr. LEA. The only idea I had in mind was, that it might be better to have reliable figures, otherwise we would have that much more confusion.

Mr. FREAR. I believe we will add to these figures considerably rather than deduct anything.

Mr. LEA. I think that is very probable, but any figures we would attempt to get at now would be unreliable.

Mr. FREAR. The construction railroad item, \$659,000, presumably—but we have no data on that to show where that went; that is, nothing to indicate from the item—to provide one-third, well, one-third of that went for the same purpose, to the Siems-Carey-Kerbaugh Corporation, and that would add more than \$200,000 to the figures already in hand. In other words, added to that \$4,585,511.99, approximately, the estimated cost of the railroad going a distance of 38 miles, there is the further item, of which one-third would be over \$200,000. That would make a total of over \$5,000,000, as the statement stands, for the Siems-Carey-Kerbaugh railroad, built a distance of 38 miles. Is that as you understand it, or I will give you this statement to look at?

Gen. MENOHER. Yes; I understand what you ask from the statement.

Mr. FREAR. What is the fact about it?

Gen. MENOHER. That is apparently true.

Mr. FREAR. And that does not affect the spruce contract of the Siems-Carey-Kerbaugh Corporation, which reached, in expenditures, over \$5,000,000 in addition. This was for \$5,000,000, if these figures are anywhere near correct, \$5,000,000 for a railroad for carrying logs a distance of 38 or 40 miles at the extreme terminus. Do you know anything about the cost of logging railroads or anything of that kind, out in that country?

Gen. MENOHER. No, sir.

Mr. FREAR. So that we will have to get that information out there?

Gen. MENOHER. Yes, sir.

Mr. FREAR. But the cost would reach in the neighborhood of \$125,000 a mile, apparently, from the figures given in your statement, if this basis of estimate is correct?

Gen. MENOHER. Yes, sir.

Mr. FREAR. You, like myself, have no exact knowledge, because until these items can be allocated back to the various railroads we have not the data; it is more a surmise, except that we do know that certain items are directly chargeable to the railroad in the State of Washington?

Gen. MENOHER. Yes, sir.

Mr. FREAR. I will ask that the statement be marked "Exhibit No. 105 (Gen. Menoher, Exhibit F)," and put in the record at this point.

(Accordingly, the statement is copied in full in the record as follows:)

EXHIBIT No. 105.

[United States Spruce Production Corporation, Portland, Ore.]

Statement of cash receipts and disbursements, June 30, 1919.

Receipts to June 30, 1919:	
Sale of debenture bonds.....	\$21,500,000.00
Capital stock.....	100,000.00
Commercial lumber sales.....	579,070.36
Aircraft lumber sales.....	5,059,074.63
Salvage sales.....	1,926,966.33
Deposits on rejected bids.....	651,621.04
Miscellaneous receipts.....	1,965,968.26
Total receipts.....	\$31,782,700.62
Less cash on hand, June 30, 1919.....	10,517,482.66
Total expenditures by corporation to June 30, 1919.....	21,265,217.96
Unpaid vouchers in process to June 30, 1919.....	368.81
Expenditures by Bureau of Airplane Production and Signal Corps prior to corporation.....	27,497,240.12
Total expenditures per statement attached.....	48,762,826.89

ABSTRACT OF EXPENDITURES TO JUNE 30, 1919.

Capital expenditures.....	\$4,506,674.70
Lands and timberlands.....	\$740,725.00
Haulage equipment.....	80,617.91
Donkey engine equipment.....	1,352,979.09
Railroad equipment.....	1,111,609.83
Marine equipment.....	75,499.38
Tools and appliances.....	17,271.39
Furniture and fixtures.....	66,734.47
Towage and rafting equipment.....	52,931.88
Construction—railroad.....	659,015.12
Construction—general.....	4,807.24
Warehouse material—Vancouver Barracks.....	344,483.39
B. A. P. advances to contractors.....	22,592,532.39
Aircraft Lumber Co.....	60,605.41
Airplane Spruce & Lumber Co.....	1,657,389.97
Clallam Co. operations.....	18,216.53
Deer Island Logging Co.....	4,000.00
Enumclaw operations.....	25,970.84
Grant Smith-Porter Bros. Co.....	3,306,266.65
Monarch Mill.....	99,497.98
Edward Murphy.....	249,564.89
Oregon Planing Mill Owners Association.....	126,581.26
Port Angeles Cut-Up Plant.....	282.99
Portland Lumber Co.....	270,908.16
Siema, Carey-H. S. Kerbaugh Corporation (spruce).....	4,341,147.85
Siema, Carey-H. S. Kerbaugh Corporation (railroad).....	3,988,511.93
S. P. D. Railroad No. 9.....	13,647.12
N. F. Titus.....	6,363.93
Toledo Sawmill.....	821,825.27
Vancouver Cut-Up Plant.....	1,975,534.04
Warrenton Mill.....	12,253.24
Warren Spruce Co.....	5,613,964.33
War Credit Board advances to contractors.....	2,493,735.80
Henry A. Brewer.....	6,300.00
J. Canby Morgan.....	8,920.18
A. P. Stockwell Lumber Co.....	20,515.62
Wm. E. Warren.....	8,000.00

War Credit Board advances to contractors—Continued.

Airplane Spruce & Lumber Co.....	\$300,000.00	
Grant Smith-Porter Bros. Co.....	300,000.00	
Warren Spruce Co.....	600,000.00	
Siems, Carey-H. S. Kerbaugh Corporation (railroad)	500,000.00	
Siems, Carey-H. S. Kerbaugh Corporation (spruce).....	750,000.00	
Disbursements for quartermaster.....		\$90,461.22
Construction cantonment.....	13,416.85	
Division Military Expense.....	33,916.68	
Subsistence of enlisted men in field.....	43,127.69	
Cants and lumber purchased for cut-up plant.....		8,667,585.37
Lumber purchased for shipment direct.....		5,099,311.99
Commercial lumber section.....		99,424.30
Purchase of lumber.....	35,270.19	
Milling and other expenses.....	64,154.11	
Intercompany and interledger charges.....		1,506,639.30
Accounts receivable.....	86,287.98	
Stumpage payable.....	135,247.10	
Siems Carey-H. S. Kerbaugh Corporation.....	63,290.09	
Warren Spruce Co.....	50.00	
Grant Smith-Porter Bros.....	30,897.76	
Deposits on rejected bids.....	651,621.04	
Logger and mill operators' accounts.....	539,245.33	
Contract logging operations.....		30,822.12
Division overhead.....		664,089.61
Cruising expense.....	3,362.12	
Deposit for fire protection.....	101,406.80	
Insurance expense.....	456.84	
Headquarters expense.....	272,359.31	
Information section expense.....	812.96	
Inspection expense.....	57,789.30	
Loading and handling lumber.....	415.92	
Loyal Legion expense.....	47,255.02	
Military information.....	877.50	
Plant protection expense.....	1,303.34	
Scaling expense.....	11,691.94	
Taxes.....	17,512.50	
Towage expense.....	59,180.59	
Transportation expense.....	89,665.47	
Liquidation of operations.....		3,011,550.09
Assembling expense.....	59,597.69	
Insurance expense.....	43,402.87	
Legal expense.....	1,822.61	
Transportation expense.....	16,204.42	
Fire-protection expense.....	497.10	
Appraising and inspecting expense.....	500.00	
Freight expense.....	599,123.20	
Sales board expense.....	53,364.93	
Selling expense.....	\$13,078.87	
Allowances.....	25.38	
Commissions.....	23,362.05	
Advertising.....	16,843.23	
Repairs to property for sale.....	55.40	
Operating expenses not included in costs.....		159,865.22
Portland Lumber Co.....	1,727.80	
Oregon Planing Mill Owners' Association.....	282.94	
Vancouver Cut-up Plant.....	43,060.51	
Airplane Spruce Lumber Co.....	7,187.28	
Grant Smith-Porter Bros.....	43,637.72	
Warren Spruce Co.....	57,273.18	
Siems Carey-H. S. Kerbaugh Corporation.....	1,641.35	
Edward Murphy.....	968.64	
N. F. Titus.....	53.80	
S. P. D. R. No. 9.....	4,032.00	

Liquidation of operations—Continued.

Liquidation expenses.....		\$103,611.73
Airplane Spruce Lumber Co.....	\$30,496.85	
Grant Smith-Porter Bros.....	33,160.03	
Warren Spruce Co.....	39,743.72	
Enumclaw operations.....	36.50	
Portland Lumber Co.....	158.19	
Siems Carey-H. S. Kerbaugh Corporation R. R.....	16.44	
Release of claims—contract cancellations.....		1,973,560.32
Total.....		\$48,762,826.89

Mr. FREAR. We will now be glad to hear Maj. Foulois.

TESTIMONY OF MAJ. B. D. FOULOIS, AVIATION CORPS.

Mr. FREAR. General, how long have you been in the service of the Government?

Maj. FOULOIS. I have been in the service of the United States Government 26 years.

Mr. FREAR. And what is your rank now?

Maj. FOULOIS. My present rank is major—captain of Infantry and major of Aviation.

Mr. FREAR. What was it at the beginning of the war in Europe in August, 1914?

Maj. FOULOIS. I was captain in the aviation section of the Signal Corps at that time.

Mr. FREAR. Now, at the beginning of our entry into the war what was it?

Maj. FOULOIS. At our entry into the war I was captain of Infantry and major of Aviation, and I was commissioned brigadier general on July 24, 1917.

Mr. FREAR. That is when we were entering the war?

Maj. FOULOIS. Yes.

Mr. FREAR. Will you tell us, major, the preparations that had been made by this Government, so far as you know, at the time of our entry into the war for an aviation program—that would be in April, 1917?

Maj. FOULOIS. The only comprehensive preparation that was made by our Government prior to the declaration of war on April 6, 1917, was certain preparations which the Chief Signal Officer charged me with approximately in March, 1917.

Mr. FREAR. Who was the Chief Signal Officer at that time?

Maj. FOULOIS. Gen. Squier.

Mr. FREAR. That was just a month before our entry into the war?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. But in August, 1916, eight months in round numbers, prior to our entry into the war, Congress had appropriated \$13,000,000 for aviation purposes. What was done during that eight months after that appropriation, which followed smaller appropriations, if you know?

Maj. FOULOIS. I have no personal knowledge of any preparation that was made prior to my assignment of duty in Washington.

Mr. FREAR. Would you, general, be likely to have any information—in a general way, I am speaking—if any definite policy or pro-

gram had been entered into by the military service of the Army aviation activities?

Maj. FOULOIS. It is my recollection that there was no definite military policy as regards aviation prior to the declaration of war.

Mr. FREAR. And what had been done prior to those eight months, subsequent to the appropriation by Congress of these \$13,000,000 for aviation purposes?

Maj. FOULOIS. To the best of my recollection, for aviation purposes certain steps had been taken in connection with the establishment and expansion of the aviation school at North Island, San Diego, Calif.; the expansion of the aviation school at Fort Omaha; the establishment and development of an aviation station of the Regular Army near San Antonio, Tex. Steps had also been taken, according to my recollection—

Mr. FREAR (interposing). Just indicate what the steps are, just as definitely as you can.

Maj. FOULOIS. I was trying to clear them up. Steps were taken by me as department aeronautical officer of the Southern Department, Fort Sam Houston, Tex., to organize additional squadrons.

Mr. FREAR. For what purpose?

Maj. FOULOIS. For assignment to duty in the Regular Army.

Mr. FREAR. That is at the time we were having our difficulties on the Mexican border, was it?

Maj. FOULOIS. That was shortly after that. I had charge of the first aerial squadron in Mexico myself.

Mr. FREAR. How many planes did we have down there when Gen. Pershing went across the line?

Maj. FOULOIS. We took eight planes into Mexico as the initial equipment of that squadron.

Mr. FREAR. And that was about what time?

Maj. FOULOIS. We crossed the line on March 19, 1915.

Mr. FREAR. What were those—just elementary training planes?

Maj. FOULOIS. Those were elementary training machines?

Mr. FREAR. Curtiss?

Maj. FOULOIS. Of the Curtiss type, JN 2 or 3, I think they were at that time designated. These planes lasted, as I recollect, possibly six weeks.

Mr. FREAR. The planes lasted six weeks?

Maj. FOULOIS. Yes, sir; they were all smashed or lost.

Mr. FREAR. They were not serviceable for that kind of work?

Maj. FOULOIS. With the exception of two, which lasted approximately that period, and we condemned them as unsafe for further use.

Mr. FREAR. And what were the next steps taken, General, that is, either in the manufacture of planes or starting on this program?

Maj. FOULOIS. The only other steps that were taken, as I recollect, before the declaration of war, were endeavors on the part of the fliers to stimulate the production of advance types of planes in the United States.

Mr. FREAR. What was done in that regard, that is, just briefly; and when was that?

Maj. FOULOIS. There was practically nothing done, as far as I could learn, except that as a result of steps which we had insisted upon, from our border experience, to have our technical sections

cooperate with the manufacturers and develop and work on more advanced types of planes.

Mr. FREAR. What manufacturers did you consult with?

Maj. FOULOIS. It is my recollection that the Curtiss Co., which at that time was about the only company in the United States—

Mr. FREAR (interposing). At Buffalo?

Maj. FOULOIS. Yes, sir; at Buffalo—was about the only company in the United States sufficiently organized and on a productive basis to do business with.

Mr. FREAR. What did you do, for instance, in making this arrangement? Did you pay them advance money, or what method was pursued?

Maj. FOULOIS. I have not any knowledge of the steps that were taken on our recommendations.

Mr. FREAR. Who would know about that? We are trying to follow this down in an orderly manner.

Maj. FOULOIS. That information should be on file in the aviation records of the Signal Corps.

Mr. FREAR. Prior to our entry into the war?

Maj. FOULOIS. As I recollect, it should be in the period during 1916.

Mr. FREAR. That ought to be in the records there now?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What was done, General; if you will follow it up? You had eight planes in 1915?

Maj. FOULOIS. 1915.

Mr. FREAR. On the Mexican border?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And six of those were destroyed?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What next took place in the aviation service?

Maj. FOULOIS. As a result of our experiences in Mexico and the great necessity for airplanes of a superior type and improved type, capable of operating in the high altitudes of Mexico, numerous telegrams and requests were made through the commander in chief of the punitive expedition, Gen. Pershing, to Washington, to expedite and supply his forces with machines capable of operating in the high altitudes of Mexico.

Mr. FREAR. What was done?

Maj. FOULOIS. Based upon those requests, several types of planes were sent to us at Columbus, N. Mex.

Mr. FREAR. Where from?

Maj. FOULOIS. From the Curtiss Co., to the best of my recollection, the first lot of these machines arrived at Columbus between the periods of May and September, 1916. I am not quite positive of the time he went in there—March, 1915 or 1916—I think it was March, 1916.

Mr. FREAR. The Secretary of War testified here 1916.

Maj. FOULOIS. As I say, it was in that period, between May, 1916, and September, 1916, when we received the replacements of the machines that had been destroyed or condemned.

Mr. FREAR. So that although in Europe, England and France and Italy and Russia at that time had been at war with the German nation for a year or a year and a half, and we have been having hostilities on the Mexican border for some time. When we did get anything in the nature of airplanes we started with eight planes, six of

those were destroyed; and then we sent for some more elementary training planes.

During all this period—and you have given some study, the committee assumes, to this subject of aviation—England, France, Italy, and Germany were putting fighting planes or pursuit planes in the service, although those planes were not armed at the outset, were they?

Maj. FOULOIS. No, sir.

Mr. FREAR. What fighting planes or pursuit planes had we adopted, either by manufacture or otherwise, up to this time of 1916, so far as you know?

Maj. FOULOIS. None.

Mr. FREAR. And the European countries had been at war for a year and a half?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What became of these machines that were sent down from the Curtiss factory, of which you spoke, General—that is, these various types of machines that came down, what kind of machines were they, particularly what were they used for? Were they training machines, or what service could be rendered by them?

Maj. FOULOIS. At the time we were operating in Mexico the only type of plane that we knew of in the United States that could be used at all was the type that we had at that time, the same type with which our first squadron was equipped.

Mr. FREAR. Those were elementary training planes?

Maj. FOULOIS. That was adopted as the elementary training type.

Mr. FREAR. Let me interrupt you. Was not the Caproni plane being used at that time in Italy?

Maj. FOULOIS. Possibly.

Mr. FREAR. It was one of the early machines, if we are right?

Maj. FOULOIS. Possibly.

Mr. FREAR. Then the Spad was being used at that time by the French? That is a fighting plane and always has been?

Maj. FOULOIS. I believe so. The only planes that we had that would answer any service condition over here was the type with which the first air squadron was equipped when we went into Mexico.

Mr. FREAR. What was that?

Maj. FOULOIS. That was the JN-4 or JN-3—I think they just made some slight change in the model.

Mr. FREAR. That was only an elementary training plane?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. It was not even an advanced training plane?

Maj. FOULOIS. No, sir.

Mr. FREAR. Who would have charge of this branch of the service and have been in a position to have determined what use could be made of this \$13,000,000 appropriated for the aviation service back in August, 1916, we will say, General—that is, outside of the Secretary of War, who, of course, is the one who has the authority to direct the expenditure of these various appropriations?

Maj. FOULOIS. As I recollect, the aviation service at that time was directly under the charge of the chief signal officer of the Signal Corps.

Mr. FREAR. And who was that?

Maj. FOULOIS. Gen. Squier. There was at that time, as I found out afterwards, when I reported for duty here in March, 1917, a separate section—that is, the aviation section of the Signal Corps was actually under the charge of a subordinate officer.

Mr. FREAR. This was before our entrance into the war?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What next occurred after these training planes had been sent down there from the Curtiss Co.—that was in the fall of 1916, as I understand it, prior to our entry into the war—in the nature of preparation or the procurement of aviation machines of any kind, so far as you know?

Maj. FOULOIS. I have no knowledge of any preparation that was made prior to our entry into the war.

Mr. FREAR. The European war had been on for two and a half years prior to our entry into the war. What was done by any one in authority, so far as you know, in regard to sending American aviators or other officers over to Europe to study the aviation activities over there?

Maj. FOULOIS. The only steps taken, according to my recollection, was the sending of Maj. William Mitchel, now brigadier general, to France, I think, either in the fall of 1916 or the early spring of 1917.

Mr. FREAR. That would be about the time or before our entry into the war?

Maj. FOULOIS. Steps were also taken to send, if I recollect, three flying officers to France for training and instruction in the French flying schools.

Mr. FREAR. When were they sent?

Maj. FOULOIS. They were sent, to the best of my recollection, either in the late winter or early spring of 1917.

Mr. FREAR. Do you know the names of the officers?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Give them to us.

Maj. FOULOIS. The three officers selected, as I recollect, were Capt. Carberry, Capt. Johnson, and I think, Capt. Milling.

Mr. FREAR. What authority were they given, or what directions, if you know, were given to them by the War Department when they were sent to Europe prior to the entry of our country into the war?

Maj. FOULOIS. I have no knowledge of any instructions.

Mr. FREAR. So that we would have to get that from them individually?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What followed the sending of these officers to Europe in regard to aviation activities on our part?

Maj. FOULOIS. As a result of their being sent?

Mr. FREAR. Were there any other people sent?

Maj. FOULOIS. Not to my knowledge; no, sir.

Mr. FREAR. How many officers did we have in Europe detailed on the different lines of battle, sent for the purpose of observation, or, do you know, General?

Maj. FOULOIS. I am not positive. But it is my recollection that the only officers directly concerned with air service matters were the three officers mentioned.

Mr. FREAR. My question goes further than that. It has been customary with this Government to get other Governments, in the case of war with some foreign Government, to send certain officers for the purpose of inspection and studying conditions?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. How many officers did we have in Europe at that time on Russian and other borders?

Maj. FOULOIS. We had, to the best of my recollection, several officers who were specifically charged with all military matters.

Mr. FREAR. Studying conditions generally?

Maj. FOULOIS. Yes, sir; with most of the belligerents.

Mr. FREAR. With each different belligerent?

Maj. FOULOIS. Yes, sir; but it is my recollection that steps had been taken or had been proposed to all of the belligerents in connection with sending aviation officers, and in nearly every instance they refused to take American observers.

Mr. FREAR. They refused to permit the Americans to observe?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Where will we get that information from official records? That certainly would be matter of record in some official records, would it not?

Maj. FOULOIS. That should be a matter of record in the office of the Chief Signal Officer.

Mr. FREAR. Because if he was acting in behalf of this Government and he was anxious about it he would have the Secretary of War make that request, would he not?

Maj. FOULOIS. Yes, sir; I particularly remember that, because I recollect sending a letter to Washington at the outbreak of the war specifically asking to be sent abroad as an observer on the battle fronts and that the answer I received was that this matter had been taken up through the embassies and through regular channels, and that authority could not be obtained.

Mr. FREAR. Do you know whether any communication was made by the Secretary of War to the foreign governments or anyone else in authority asking that aviators be permitted to go from this country abroad to study aviation there?

Maj. FOULOIS. No, sir.

Mr. FREAR. But you did understand that in some of the channels that that matter was urged they objected to it?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What was the character of the objection, or do you know?

Maj. FOULOIS. As I endeavored to find out, after I reported for duty in Washington, the principal objection seemed to be the great secrecy which they exercised to keep each other from knowing the progress in aviation.

Mr. FREAR. We were, as a Government, loaning a great many millions of dollars, reaching into billions of dollars, to various governments at that time, were we not?

Maj. FOULOIS. Yes, sir.

Mr. LEA. Not before the war?

Mr. FREAR. That is right, although individual loans had been made at that time.

Do you know, General, whether England objected to our aviators going over there and studying conditions?

Maj. FOULOIS. I, of my own knowledge, do not know of any of the countries objecting.

Mr. FREAR. But, according to this rumor or this report, can you tell what nations it was that objected?

Maj. FOULOIS. No, sir.

Mr. FREAR. You do not know whether England or France or Italy, or what nations?

Maj. FOULOIS. No, sir.

Mr. FREAR. You have no information on that?

Maj. FOULOIS. No, sir.

Mr. FREAR. Was any request made by this Government to study conditions on the German or Austrian side, who also were supplied with certain aircraft at that time?

Maj. FOULOIS. Not to my knowledge. He had, as I recollect, during the first two years of the war, or at least prior to our entering the war, American Army observers with the Germans.

Mr. FREAR. Prior to the war?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That is, American Army observers?

Maj. FOULOIS. With the German armies in the field prior to our entry into the war.

Mr. FREAR. But none studying aviation?

Maj. FOULOIS. Not as a specialty.

Mr. FREAR. And Germany was ahead of all other governments when she entered the war with her aviation program, was she not?

Maj. FOULOIS. Yes, sir; certain phases.

Mr. FREAR. Was not that true not only of battle and pursuit planes and balloon service and all?

Maj. FOULOIS. It was generally thought at the outbreak of the war that the Germans particularly lead in their lighter-than-air craft, that is, the balloon service, and had not developed the airplane up to the point that France had.

Mr. FREAR. She had more, had she not, than any other nation?

Maj. FOULOIS. I think she did, judging from results afterwards.

Mr. FREAR. Was any effort made by us, or do you know, to send aviators to Germany or Austria to study their methods?

Maj. FOULOIS. Not to my knowledge.

Mr. FREAR. What was done with this \$13,000,000 that Congress appropriated in August, 1916, if you know?

Maj. FOULOIS. I have no recollection as to the actual disposition of the money or its allotment.

Mr. FREAR. Did you ever discuss with the Secretary of War anything about the aviation program prior to our entry into the war?

Maj. FOULOIS. Not directly; no, sir.

Mr. FREAR. Who was it that you talked with, Gen. Squier?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. You discussed this with him frequently?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Did you impress upon him the importance of this branch of the service, as you viewed it, and as it finally turned out to be very important?

Maj. FOULOIS. Having been in it since 1908, I had impressed on the Chief Signal Officer and upon every other officer in the Army with whom I could talk, the importance of the Air Service.

Mr. FREAR. A man in any particular branch of the Army becomes enthusiastic about it.

Maj. FOULOIS. To a great extent.

Mr. FREAR. And he has the thing close at heart, and you did that in respect of the Air Service in the Army?

Maj. FOULOIS. I was so interested in the Air Service in the early days that I spent money out of my own pocket in 1910 down in Texas.

Mr. FREAR. So that when we entered the war with Germany we had no program, as you say, but we had sent over three officers, and that was the only effort we had made. Do you know where those officers were sent?

Maj. FOULOIS. All of those officers, to my recollection, were sent to France.

Mr. FREAR. And what month was that?

Maj. FOULOIS. I am not positive of the month, but it is my recollection that they were all in France at the outbreak of the war—at the time we declared war.

Mr. FREAR. It would seem that France, of all the nations, in any event, was not objecting to our sending observers or officers there to study aviation conditions, if they were sent over there for that purpose at that time.

Maj. FOULOIS. That would be the natural assumption; yes, sir.

Mr. FREAR. And you do not know as to what the attitude of the other nations was?

Maj. FOULOIS. No, sir.

Mr. FREAR. What was the next step, General, so far as you know, after these three officers were sent over? Did they bring back any recommendations, or did they do anything?

Maj. FOULOIS. Those officers remained over there practically throughout the entire period of the war.

Mr. FREAR. In France, principally?

Maj. FOULOIS. In France; yes, sir.

Mr. FREAR. They remained in the aviation service?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What else was done, the next step that was taken by this Government, over there, so far as you know?

Maj. FOULOIS. None to my recollection prior to the outbreak of the war.

Mr. FREAR. Then after the outbreak of the war, what occurred?

Maj. FOULOIS. After the outbreak of the war, the first step taken in connection with getting in touch with foreign developments and possible application of it to our own use, was the sending of a mission under the late Col. Bolling, which I think was about in June.

Mr. FREAR. June, 1917?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was the first definite step that was taken, after war was declared between Germany and France. The first step that we took to ascertain conditions over there definitely was the sending of the Bolling Commission in June, 1917. They went over there and made a study and reported when?

Maj. FOULOIS. They reported continuously by cable and mail their progress beginning immediately upon their arrival in England, and thereafter in France, after they arrived there. Their first step was in England, and they continued to report, according to my recollection, by mail and cable until the return of one or two members of the commission, or several members of the commission in August or September.

Mr. FREAR. September, is the testimony, if I recollect?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was Col. Clark's testimony and other members of the commission who returned with him?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. When was it Gen. Bolling died?

Maj. FOULOIS. He was killed between the 21st and 23d—I am not sure of the date now; he was killed in the big spring offensive 1918.

Mr. FREAR. In what month?

Maj. FOULOIS. March, 1918.

Mr. FREAR. Did he return with the commission at that time?

Maj. FOULOIS. No, sir.

Mr. FREAR. Col. Clark sent some recommendations back here in June by cable, and he testifies about it, and that is the information from the Thomas committee, that his recommendations called for the building of three English aircraft, two French aircraft, Spads; one Italian, a Caproni—six in all; that none of those recommendations were followed out. That is, as you understand it—that is his recommendation by cable?

Maj. FOULOIS. It is my recollection that he made that recommendation.

Mr. FREAR. And none of those recommendations were followed out, so far as you know?

Maj. FOULOIS. No; and he also made the recommendation after he returned.

Mr. FREAR. But I am bringing it up to September.

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Up to that time no steps had been taken by this Government, so far as you know, in adopting any program for the manufacture of airplanes up to September, 1917?

Maj. FOULOIS. Other than conferences here in Washington with representatives of Italy, France, and England.

Mr. FREAR. But no definite program was determined upon?

Maj. FOULOIS. No definite steps were taken.

Mr. FREAR. And after the steps were taken they were continually changed, and they reversed themselves very frequently, did they not, from that time on?

Maj. FOULOIS. I can not say that, sir, because I left in October, and I had no actual knowledge except from hearsay and reading.

Mr. FREAR. What is the information that you gathered?

Maj. FOULOIS. The information that I had upon it is simply information that I read recently in hearings, I think, held in Washington during 1918. The only definite information that I had prior to my sailing for France, in October, 1917, was the action taken by the joint Army and Navy technical aircraft force, of which I was chairman, and of which Col. Clark was also a member, was the substantiation of his recommendations.

Mr. FREAR. That is, his recommendations which he brought back?

Maj. FOULOIS. His recommendations for certain types to be produced in this country and for the establishment of the types to be entirely produced in our big program.

Mr. FREAR. He returned in September, 1917. How long was it before we reached any point of production on any machine, so far as you know, or were you in Europe?

Maj. FOULOIS. I was in Europe.

Mr. FREAR. And who would know about that, coming down to the time you left—who would know what was done? We understand you have no information excepting what you learned from other sources of what was done after he returned.

Maj. FOULOIS. Who would have that information?

Mr. FREAR. Yes; who would have that information, who could we call upon to furnish us information and see what was done after September, 1917, at the return of the Bolling Commission, outside of Col. Clark himself? His testimony, of course, has been taken, and also that of Maj. Muhlenberg and others have been taken by other committees. But we want to avoid the covering of the same ground which has been gone over by other committees so far as we can.

Maj. FOULOIS. The persons who had the most accurate knowledge of what steps had been taken in air production, or what progress had been made in air production, in my opinion, after my sailing to France and during the period of the war, would be the men whom we cooperated with in connection with drawing up the program and who afterwards took charge of it.

Mr. FREAR. That is, in this country?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Who were they?

Maj. FOULOIS. Men that were primarily in charge, to my recollection, when I left, who would be charged with the question of production, were Col. Deeds—

Mr. FREAR. He was not a military man, excepting that he received an appointment in the Army?

Maj. FOULOIS. He was made colonel of the aviation section, Signal Corps.

Mr. FREAR. Had he ever had any prior experience in aviation, so far as you know?

Maj. FOULOIS. Not to my knowledge.

Mr. FREAR. Just a motor man and manufacturer there in Dayton?

Maj. FOULOIS. A manufacturer in Dayton. And in addition to Col. Deeds, I believe, was Col. Montgomery.

Mr. FREAR. He was a man who was from Philadelphia, a banker, was he not?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And engaged, according to the testimony, I think, in handling motor stocks?

Maj. FOULOIS. Yes, sir. Mr. Howard Coffin was closely associated with the airplane production at that time.

Mr. FREAR. Mr. Coffin, as I understand it, was a man who had been interested in aviation. What was his business?

Maj. FOULOIS. As I recollect, his business prior to my personal association with him was as president or vice president of the Hudson Motor Car Co.

Mr. FREAR. He was with a motor company?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And who else was there?

Maj. FOULOIS. I am not sure of the other members of the aircraft production. There was Col. Walden, who had a temporary commission.

Mr. FREAR. What was he originally connected with?

Maj. FOULOIS. He was originally associated with the Packard Co.

Mr. FREAR. That is, these men up to this point were men connected with the motor car industry, outside of Montgomery, who was connected with a bank, and, of course, Deeds, who was interested in motor work—that is, with his Delco system and things of the kind.

But outside of them, none of these men were in aviation work who ever had experience; that is true, so far as you know?

Maj. FOULOIS. According to my knowledge. They were the representatives with whom we dealt; that is, the Army and Navy technical force, of which I was chairman, and two other Army officers and these naval officers. The previously named officers were the men with whom we dealt entirely in coordinating our military aviation program, particularly in connection with the production of new types and of all types of machines.

Mr. FREAR. I read just briefly from the Hughes report. Let me say that the Hughes report was based on the testimony of nearly 300 witnesses, and the Attorney General of the United States was in attendance throughout the hearing, and he practically approved of all the findings, if I recollect, of the Hughes report, excepting the question in regard to Col. Deeds's prosecution, and I read just briefly, in order to save going over this again, from that part under the subject head of "Service or combat and bombing planes"—this was, I assume, while you were in Europe, but it states as follows in regard to the various claims. [Reading:]

The program charts which were prepared show extraordinary variations with respect to quantities and surprising expectations as to deliveries. Thus the program for DH-4s shows a total program on August 2, 1917, of 8,000; August 16, of 7,500; August 22, of 5,000; August 24, of 6,000; August 25, of 15,000; August 31, of 6,000; September 4, of 15,000; October 17, of 250; October 29, of 1,000, at which number it appears to have been continued until January 18, 1918, from which time it was increased until 4,500 appear in the program of February 11, 1918, and 8,000 in that of February 19 and thereafter.

That is the DH-4, and that is the only machine we ever sent to the front?

Maj. FOULOIS. That is the only American produced machine.

Mr. FREAR. That is the only machine we did send there of any kind?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. We bought machines over there. He says:

According to this program of schedule it seems to have been anticipated on August 2, 1917, that 25 DH 4's would be delivered in October, 100 in November, 425 in December, 750 in January, and 1,000 in February, and more in each of the succeeding months. Even as late as September 4, 1917, the schedule shows expected deliveries of 425 in October, 1917; 250 in November; 1,063 in December; and in the program of November 5, 50 were scheduled for delivery in December, 100 for January, etc.

The program of September 5, 1917, for the DH 9's calls for 2,000 of this type; that of October 9, for 4,000; October 17, 6,750; October 25, 7,750; October 29, 7,000; at which it was continued until January 18, 1918, when it became 7,500, to be reduced on February 1 to 5,400, and on February 12 the DH 9 schedule was canceled.

We never received any DH 9's on the fighting line, did we?

Maj. FOULOIS. No, sir.

Mr. FREAR. That is the uncontradicted testimony, that we never had a fighting plane or bombing plane on the fighting front of American manufacture, excepting, as claimed by certain people, that the DH 4 could answer for bombing purposes. We have discussed that here, and there is no need of returning to it. And that we had 213 of those at the front on the day of the armistice. That is the machine which has been styled by Rickenbacker, who was in the aviation service, as a "flying coffin."

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Because of the motor being at one end, gasoline tank at the other, and the aviator in between, he had no possible chance of

escape, according to the testimony, in case of an accident, and he could get out neither in front nor behind; that was the objection, was it not?

Maj. FOULOIS. One of the objections.

Mr. FREAR. Of course, Gen. Pershing sent over 60 objections, referred to by Gen. Patrick, some material and some not material?

Maj. FOULOIS. Having instituted the investigation, I had a pretty thorough knowledge of it.

Mr. FREAR. What is your judgment of the DH 4, or do you care to express it?

Maj. FOULOIS. The DH 4, as we received it, needed a lot of corrections.

Mr. FREAR. What, among others—I mean, that were most important?

Maj. FOULOIS. The most important one, of course, from the flyer's standpoint, was the one you just brought up and, in connection with that, the nonprotected gas tank. We had types of machines there in France of gas tanks protected.

Mr. FREAR. One of the greatest objections urged by aviators, so far as efficiency of use is concerned, is the fact that the pilot and observer were separated so that they could not communicate with each other readily?

Maj. FOULOIS. That is one of the practical objections in the matter of efficient operation. There were a great many technical and mechanical objections to the machine.

Mr. FREAR. I am speaking of the type of machine.

Maj. FOULOIS. Of that type, that was one of the principal objections.

Mr. FREAR. Then, was it not true, that as an armed plane that there was a great deal of trouble with what we call synchronizing—the use of the gun in that respect?

Maj. FOULOIS. Without referring to the original half of them, I presume that was one of the objections we found. I might state in connection with that, if you care to have a little history on it, which might clear up a few points and would only require a few moments—

Mr. FREAR. Was it straightened out afterwards?

Maj. FOULOIS. A great many of these faults were anticipated, and it was purely anticipated on the basis of our experience in Mexico. When the first machine arrived, I directed my chief engineer to go down and inspect that plane and find everything conceivably wrong with it. That was the first De Haviland plane sent over. I directed him to go through it with a fine-tooth comb and report on everything, with his committee, that he could find wrong.

Mr. FREAR. Then those objections which in the Pershing cablegram of June 24, 1918, were based on the first De Haviland?

Maj. FOULOIS. The first machine that arrived in France.

Mr. FREAR. Were there several, or just that one?

Maj. FOULOIS. One or two came later, but the inspection, according to my recollection, was made on the very first one that arrived, and the inspection was made with the idea of immediately finding out what was wrong, and send the information back, and have the faults corrected, which would have necessitated us having a manufacturing establishment in France to do that kind of work, and that was the basis of that original cablegram.

Mr. FREAR. Were other cablegrams sent during that same month to the effect that it was necessary to have inspection on this side and that repairs on any extensive scale was impossible over there?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. So you have knowledge of the conditions that have been disclosed to the committee?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The committee will now take a recess until 2.30 o'clock this afternoon.

(Thereupon, at 12.35 o'clock p. m., the committee took a recess until 2.30 o'clock this afternoon.)

AFTER RECESS.

The committee resumed its session at the expiration of the recess, at 2.30 p. m.

TESTIMONY OF MAJ. B. D. FOULOIS—Resumed.

Mr. FREAR. When we were leaving just before dinner, Gen. Foulois, I was trying to find out the military program that had been determined by the officers in authority, and you stated that three officers had been sent over and afterwards the Bolling Commission, and when they returned in September they made certain recommendations, and I believe you mentioned them. One of the recommendations was that three British machines, two French and one Italian were recommended. And now, you were connected with this same work at that time, I understand?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What did you do with regard to this work?

Maj. FOULOIS. Prior to the coming of the commission or about the same time the joint Army and Navy technical committee was appointed, of which I was made chairman.

Mr. FREAR. That is in June, 1917?

Maj. FOULOIS. Yes, sir; we started in to determine definitely the types of machines that should be in production in this country.

Mr. FREAR. Who did this; you?

Maj. FOULOIS. The committee of which I was chairman.

Mr. FREAR. What committee was that?

Maj. FOULOIS. The joint Army and Navy technical committee. We came to practically the same conclusion that the Bolling Commission carried out after they arrived in France, so far as the selection of types was concerned. In fact, we determined on the type we wanted here before we went over.

Mr. FREAR. That was in 1917?

Maj. FOULOIS. 1917; yes, sir.

Mr. FREAR. Then you determined upon the types?

Maj. FOULOIS. We tentatively determined upon the types here and then the commission was sent over to select those types.

Mr. FREAR. That is the Bolling Commission?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. I see; yes.

Maj. FOULOIS. To provide the work that we had tentatively planned, and send them back to the United States.

Mr. FREAR. When was that?

Maj. FOULOIS. Immediately after the declaration of war, and carried it all through April and May and up to the time the commission went to France, in the latter part of June as I recollect.

Mr. FREAR. Now, this commission of which you were a member, did they formulate any program or any policy?

Maj. FOULOIS. We drew up as I recollect, several plans for the production—first the purchase of certain types of foreign planes; I think they are on record here somewhere. I have not the papers here with me but I think you will find it on the records here. Certain types of which two planes each were to be purchased in Europe.

Mr. FREAR. In Europe?

Maj. FOULOIS. Yes, sir; that was approved by both the Secretary of War and the Secretary of the Navy, as this was a joint commission.

Mr. FREAR. What is your recollection as to what those machines were?

Maj. FOULOIS. I think you have it already in the record, but I am positive that included the DH 4 and the Spad.

Mr. FREAR. The Caproni?

Maj. FOULOIS. I am not positive about the Caproni, but I think it included all the standard types.

Mr. FREAR. Of French and English machines?

Maj. FOULOIS. Yes, sir; that was approved by both the Secretary of War and the Secretary of the Navy, and it was the basis on which the commission worked in procuring standard types for the United States.

Mr. FREAR. About what time was this?

Maj. FOULOIS. All this was carried on in May and June.

Mr. FREAR. That would be immediately after the declaration of war?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That is, very close after?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Now, what did your committee further determine, if anything, with regard to the program here?

Maj. FOULOIS. The next step in carrying out the program was to determine what our organization and service would need, and what would be necessary to carry it into effect?

Mr. FREAR. That is, in this country?

Maj. FOULOIS. Yes, sir; that was set forth in another recommendation from the Joint Army and Navy Technical Committee, which was also approved by the Secretary of War and the Secretary of the Navy, and specified as I recollect the fundamental basic numbers and types that we wanted to have put in production in the United States.

Mr. FREAR. Now, let me ask you have you testified before any committee in regard to this before?

Maj. FOULOIS. No, sir; this is the first testimony I have given since 1917.

Mr. FREAR. Now, will you go and tell the committee what was done at that time, and what plans were formulated by your commission at that time before the Bolling Commission went to Europe?

Maj. FOULOIS. The last statement covered practically the only plans, the only important plans, that had to do with the Army Air Service program. It also included part of the—either that recommendation included a part of the naval program or a subsequent

recommendation in which we took care of the Navy at the same time.

Based upon these latter recommendations I was given the task of drawing up the entire program to be presented to the General Staff, and with the ultimate idea of presenting the entire program to Congress and the necessary organization to put it into effect, and that was worked out in the form of estimates for funds, and in the form of a bill for the necessary personnel to put it into effect.

Mr. FREAR. Now, the first thing, I suppose, you would plan in a case of that kind was what work was to be performed?

Maj. FOULOIS. Exactly.

Mr. FREAR. The scope of it, and then what it would cost?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Now, can you give the committee a brief statement of the general plan—

Maj. FOULOIS (interposing). The general scope, to start in with we had to draw on a very vivid imagination; we had no experience outside of a little in Mexico.

Mr. FREAR. That is our Government had not?

Maj. FOULOIS. Yes, sir; we had to collect all the experience we had and go to work under very difficult conditions. I had, fortunately, helping me on this plan two officers of the French Army who were members of Marshal Joffre's mission to the United States.

Mr. FREAR. Do you remember their names

Maj. FOULOIS. Yes, sir; Maj. Tulasne, he remained here as the French liaison officer; and Capt. DeGrange.

Mr. FREAR. They were officers and experts of the French Aviation Service?

Maj. FOULOIS. Yes, sir; and on Marshal Joffre's mission, and they remained and helped me on the plans and estimates for a program.

Mr. FREAR. Now, first, will you give us the plan that was proposed? Just a summary of it.

Maj. FOULOIS. Well, the plans involved—fundamentally we based our whole program—

Mr. FREAR (interposing). Let me ask you this: I learned there was such a plan, and I have asked you to bring such papers as you have relative to this plan, and I have asked that since this hearing began.

Maj. FOULOIS. Yes, sir; the only plan we had—that is, the fundamental basis in establishing our organization was based on an Army of approximately 2,000,000 to 3,000,000 men; we had no figures; no one knew what our Army was going to be, what the size of it was going to be. We had no policy that gave us any idea how to plan, so I made a guess at it, that we would have between 2,000,000 and 3,000,000 men, and what personnel we would need to work for an Army of that size and started off on that basis.

Mr. FREAR. Now, was that estimate based on any particular number of men, 1,000,000, 2,000,000, or was it an arbitrary estimate of what we would need over there?

Maj. FOULOIS. I think I have the figures on that. That, I might state, was the preliminary plan that we started to work under, and it was changed later—that is, the relative basis of our plans was changed later on a cablegram from the French Premier.

Mr. FREAR. Give us first what is the estimate you have there and then tell us what the change was, if any.

Maj. FOULOIS. Based on the number of men?

Mr. FREAR. Yes, sir.

Maj. FOULOIS. As I recollect we based it originally on an army of approximately 3,000,000 men.

Mr. FREAR. On an army of 3,000,000 men?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was, I think, the testimony of Gen. Patrick when he was here before us.

Maj. FOULOIS. Yes; I have not the figures; that is, what we based it on, and then we used as our principal argument before the General Staff and before the Congress, a cablegram from the French Premier. I happen to have a copy of it here. It has already been quoted in a number of hearings.

Mr. FREAR. What is it?

Maj. FOULOIS. It is from the French Premier, M. Ribot. The French Government is anxious to know—it is a request from the French Government, briefly, to have 5,000 pilots and 50,000 mechanics or men on the French front by April, 1918.

Mr. FREAR. That is, American pilots?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That is, 5,000 pilots and 50,000 mechanics?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. By what time?

Maj. FOULOIS. April, 1918; by the time of the spring campaign in 1918.

Mr. FREAR. What time was that cablegram received?

Maj. FOULOIS. That cablegram, as I recollect, was received from the Premier of France on May 24, 1917. I can quote it if you wish.

Mr. FREAR. Yes.

Maj. FOULOIS (reading):

It is desired that in order to cooperate with the French aeronautics the American Government should adopt the following program: The formation of a flying corps of 4,500 aeroplanes, personnel and material included, to be sent to the French front during the campaign of 1918. Total number of pilots, including reserves, should be 5,000, to 50,000 mechanics.

Mr. FREAR. That was 4,500 aeroplanes of American manufacture?

Maj. FOULOIS. I think it was so understood.

Mr. FREAR. That gave about a year in which to complete that program?

Maj. FOULOIS. Yes, sir. Pardon me, there was another paragraph to that cablegram.

Two thousand planes should be constructed each month, as well as 4,000 engines, by the American factories. That is to say, in the first six months of 1918, 16,500 planes of the latest type and 30,000 engines will have to be built. The French Government is anxious to know if the American Government accepts this proposition, which would allow the Allies to win the supremacy of the air.

RIBOT.

Mr. FREAR. That was a request from the French Government to know whether this Government would be able to furnish 5,000 pilots and 50,000 mechanics and 4,500 aeroplanes within the six months; and then it speaks about the 2,000 planes each month; what was that reference to that 4,000 planes?

Maj. FOULOIS. That was the basis they figured we would need to keep up production.

Mr. FREAR. Subsequent to this supply?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Of 16,500 planes and the 30,000 engines?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. I get it now. Now, what next occurred?

Maj. FOULOIS. Based upon that cablegram, and also from the tentative program, the little knowledge we had of what our military policy was to be, I was directed to go ahead and draw up an estimate for the necessary funds to cover the purchase and production of the necessary material and all the items in connection with training stations, land, and whatever conceivable item would be possibly needed in the carrying on of the program.

Mr. FREAR. Now, what was the answer we sent to the French nation?

Maj. FOULOIS. I have never seen the answer, but I understand it was to the effect that we accepted their proposition.

Mr. FREAR. Shortly afterwards, was it?

Maj. FOULOIS. Yes, sir; I think shortly afterwards.

Mr. FREAR. Now, what next occurred? You say you made your plan of what the scope of this should be; what was done then?

Maj. FOULOIS. Based upon that plan I proceeded to get these two French officers in conference steadily with me, and we drew up tentatively through their vision of what was going on over there, of what would be needed in the line of depots, schools, and training stations, and everything that would be needed so far as we could visualize it, and also the estimates of what we would have to construct over here in the line of training stations and shops.

Mr. FREAR. They gave you the benefit of the expenses over there as well as the expenses here?

Maj. FOULOIS. As far as we could get them. They, of course, did not have much experience on expenses, because expenses did not cut much figure; they were paying anything for anything they could get. But the principal advantage to us was they could give us the front-line situation and show us what the troops had to have to keep them operating, and we could draw a picture of the whole situation over there and we planned our service in France on that line, so far as the estimates are concerned.

Mr. FREAR. Now, can you give us the estimates or whatever you have in that connection?

Maj. FOULOIS. I have here a copy of the original estimates as they were submitted to Congress.

Mr. FREAR. By your committee?

Maj. FOULOIS. Yes, sir; item by item.

Mr. FREAR. Are you familiar with that?

Maj. FOULOIS. Yes, sir; they are all there.

Mr. FREAR. Summarize it, if you can; give the totals.

Maj. FOULOIS. The items in connection with aeroplanes and engines are—it would take a book to give them all the way down. The aeroplanes and engines, numbers, types, and the approximate unit cost of each.

Mr. FREAR. Let me see how much there is in that?

Maj. FOULOIS. There is our estimate. [Handing paper to Mr. Frear.]

Mr. FREAR. I think we can print the whole thing.

The paper referred to was thereupon marked "Exhibit No. 105, Foulois," and is as follows:

EXHIBIT 105, FOULDIS.

Estimate of funds, aircraft, United States Army.
[Fiscal year July 1, 1917, to June 30, 1918.]

Type of airplane.	Number required.	Unit cost of aeroplane.	Total cost of aeroplanes.	Type of engine.	Number required.	Unit cost of engine.	Total cost of engines.	Grand total.
IN-4	5,000	\$5,000	\$25,000,000	A-7-a.....	5,000	\$2,300	\$11,500,000	.....
DeH-4	2,500	5,000	12,500,000	O-X-5.....	5,000	3,000	15,000,000	.....
BE-5	800	5,000	4,000,000	R-R, or equivalent.....	5,000	6,000	30,000,000	.....
Spad	800	5,000	4,000,000	H-8.....	1,600	6,000	9,600,000	.....
Sopwith	800	5,000	4,000,000	H-8.....	1,600	6,000	9,600,000	.....
				Clerget, 130.....	1,600	5,000	8,000,000	.....
Total			49,900,000	Total			83,700,000	\$133,600,000
HOME AND INSULAR POSSESSION SERVICE.								
R-4	200	\$8,000	1,600,000	V-2-3.....	400	\$6,000	\$2,400,000	.....
R-6	350	9,000	3,150,000	V-2-3.....	700	6,000	4,200,000	.....
Fairman seaplanes	175	5,000	875,000	H-6.....	350	6,000	2,100,000	.....
			5,625,000				8,700,000	14,325,000
Purchase of samples of foreign airplanes.			240,000				450,000	.....
Rights to manufacture and complete plans of foreign airplanes.			3,000,000	Purchase of samples of foreign engines.			3,000,000	.....
			3,240,000	Rights to manufacture and complete plans of foreign engines.			3,450,000	6,690,000
SERVICE AIRPLANES AND ENGINES, LATEST TYPE, TO BE PRODUCED BEFORE JUNE 30, 1918.								
Reconnaissance and artillery control	4,000	5,000	20,000,000	Engines	8,000	6,000	48,000,000	.....
Fighting	6,667	5,000	33,335,000	.....do.....	13,334	6,000	80,004,000	.....
		1,200						.....
Bombing	1,333	6,000	11,190,000	.....do.....	2,666	6,000	15,996,000	.....
		30,000						.....
			64,625,000				144,000,000	208,625,000

Total number of airplanes.....	22,626
Total number of engines.....	45,250
<hr/>	
Total cost of all airplanes.....	\$125,290,000
Total cost of all engines.....	239,850,000
<hr/>	
Total cost of both airplanes and engines.....	365,140,000

Equipment for 57 balloon squadrons (mobile army) at \$365,150 each	\$20,813,550
Maintenance, upkeep and operation of 57 balloon squadrons at \$121,000 each	6,897,000
Equipment for 20 coast defense balloon companies at \$58,700 each	1,174,000
Maintenance, upkeep and operation of 20 coast defense balloon companies at \$12,000 each	240,000
Equipment for 67 training squadrons at \$200,000 each	13,400,000
Maintenance, upkeep, and operation of 67 training squadrons at \$50,000 each	3,350,000
Equipment for 8 oversea squadrons at \$200,000 each	1,600,000
Maintenance, upkeep, and operation of 8 oversea squadrons at \$50,000 each	400,000
Equipment for 2 frontier squadrons at \$200,000 each	400,000
Maintenance, upkeep, and operation of 2 frontier squadrons at \$50,000 each	100,000
Equipment of 1 expeditionary squadron going to France	200,000
Maintenance, upkeep, and operation of 1 expeditionary squadron going to France	50,000
Equipment of 266 service squadrons at \$200,000 each	53,200,000
Maintenance, upkeep, and operation of 266 service squadrons at \$50,000 each	13,300,000
Equipment of 96 supply squadrons at \$115,000 each	11,040,000
Maintenance, upkeep, and operation of 96 supply squadrons at \$25,000 each	2,400,000
Equipment for 11 repair squadrons at \$200,000 each	2,200,000
Maintenance, upkeep, and operation of 11 repair squadrons at \$50,000 each	550,000
Spare parts for airplanes (20 per cent of total amount for airplanes)	24,010,000
Spare parts for engines (30 per cent of total amount for engines)	70,920,000
Acquisition of land for 24 training stations	8,250,000
Temporary construction of 24 training stations	20,625,000
Base equipment for 24 training stations at \$90,000 each	2,160,000
Maintenance, upkeep, and operation of 24 training stations at \$10,000 each	240,000
Construction, maintenance, upkeep, and operation of 3 general supply depots at \$640,800 each	1,922,400
Temporary construction of 6 training stations in Europe (12 squadrons) (service of the rear) at \$375,000 per squadron	4,500,000
Base equipment for 6 training stations in Europe (service of the rear) at \$90,000 each	540,000
Maintenance, upkeep, and operation of 6 training stations in France (service of the rear) at \$10,000 each	60,000
Temporary construction of 40 aircraft parks in France (service of the rear) at \$13,600 each	544,000
Temporary construction of 4 advance depots of supply in France (service of the rear) at \$1,210,000 each	4,840,000
Temporary construction of 1 machine repair shop in France (service of the rear) at \$96,000 each	96,000
Temporary construction of 1 complete airplane depot in France (service of the rear)	1,650,000
Temporary construction of 1 spare parts depot in France (service of the rear)	2,700,000
Temporary construction of 1 base depot in France (service of rear) (port of debarkation)	3,324,000
Manufacture and purchase of special aviators' clothing and equipment	1,358,440
Expenses of officers, enlisted men, civilian employees and authorized agents on special duty abroad in connection with technical observation, investigation and research work	67,200
For vocational training at training stations, 24 stations, at \$25,000 each	120,000
Pay of reserves, enlisted men and civilian employees and travel expenses of same when traveling without troops	37,347,862
For experimental investigation, purchase and development of new types of airplanes, engines and other experimental equipment	2,000,000
Maintenance, upkeep, and operation of schools of Military Aeronautics, including tuitions of students	1,712,000

Contingent expenses, office equipment, stationery, plans, drawings, photographic material, etc.....	\$100,000
Machine guns for service airplanes.....	24,000,000

Total..... 707,541,452

Deductions:

Army appropriation bill, fiscal year 1918..	\$10,800,000
Urgent deficiency bill, fiscal year 1918....	43,450,000
Sundry civil bill (Panama).....	750,000
Fortifications bill.....	4,800,000
	<hr/>
	\$59,800,000

Equipment on hand, en route, and under orders, purchased from fiscal year appropriation 1917:

Airplanes and seaplanes.....	5,000,000
Extra parts and accessories.....	500,000
Extra engines and spare parts.....	750,000
Hangars and buildings.....	500,000
Motor vehicles.....	250,000
Miscellaneous.....	500,000
Reserve officers and enlisted men....	800,000
Lighter-than-air equipment.....	200,000
	<hr/>
	8,500,000
	<hr/>
	68,300,000

Additional appropriation needed..... 639,241,452

Mr. FREAR. Will you tell the committee the totals the best way to make it clear to us?

Maj. FOULOIS. There are 42 individual items on there.

Mr. FREAR. Now, this contains the estimates?

Maj. FOULOIS. There is the entire estimate of all the items, figures, and everything on each sheet. This set of papers [referring to another paper] has each individual item in detail.

Mr. FREAR. This statement is accompanied by what we would call working plans?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The first \$133,600,000 is the grand total in regard to types of aeroplanes, the number required, the total cost of type of engine and number required, the grand total on that was \$133,600,000?

Maj. FOULOIS. Yes; that is divided up into this service; this was for home and insular possession service.

Mr. FREAR. Then this is subdivided, as you have stated here, under several headings, reaching a total of \$363,140,000?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The second page which you have here of Exhibit No. 105, that is brought forward, \$363,140,000, and the second page carries forward \$627,681,950, and the third page carries the totals of \$707,541,452; that is the total?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Now, I notice from the third page that there is here what appears under the head of "Deductions," for instance, the Army appropriation bill of 1918, \$10,800,000; that is appropriations that came through other channels?

Maj. FOULOIS. Other appropriations that were available.

Mr. FREAR. The urgent deficiency bill of 1918, \$43,450,000; that is right, is it?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was in the appropriation of the Signal Service of 1917 and 1918, the act of June 15, 1917, \$43,450,000?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was deducted?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Then the sundry civil bill, \$750,000?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And the fortification bill, \$4,800,000; a total of \$59,800,000?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Then there were other items purchased from the fiscal year appropriation of 1917, aeroplanes and seaplanes, \$5,000,000, and various others, reaching a total of \$8,500,000, or a total deduction of \$68,300,000, leaving a balance of \$639,241,452, recommended by your commission as an appropriation?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That was made, do you know what time, for the fiscal year from July 1, 1917, to June 30, 1918?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Based on your recommendation, I assume, on the 24th day of July, 1917, Congress passed an appropriation for \$640,000,000.

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That is practically the amount here?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The amount here is \$639,241,452.

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And this was the basis for which that appropriation was made?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. In that appropriation, as I well remember, not one word was indicated as to the purposes of the appropriation, how it was to be used, Congress was advised that that was to be determined entirely by the Aviation Board; we were told, however, that it provided for a great many machines, and if I remember correctly the American minister in England made a speech about that time, although we were very quiet about it, claiming 20,000 machines would be built and be over there by the time named by him and the French. That is what it was for?

Maj. FOULOIS. That program.

Mr. FREAR. This program of 16,500 machines, is that right?

Maj. FOULOIS. That is the French figures.

Mr. FREAR. You gave me the figures 16,500 machines during 1917.

Maj. FOULOIS. Yes, sir; that was the estimation; the estimate covers the actual number of machines.

Mr. FREAR. How many were there to be?

Maj. FOULOIS. Twenty-two thousand six hundred and twenty-five.

Mr. FREAR. For 22,625 machines?

Maj. FOULOIS. Yes, sir; and 45,250 engines.

Mr. FREAR. Forty-five thousand two hundred and fifty engines?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And according to this program, and I now observe the 4,500 aeroplanes were to be built for a prior year, that was to be built by what time?

Maj. FOULOIS. I presume within the fiscal year.

Mr. FREAR. Out of this appropriation?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Out of this appropriation for that fiscal year?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Now, what occurred?

Maj. FOULOIS. What occurred? I do not know that much of anything occurred.

Mr. FREAR. Well, Congress made the appropriation of \$640,000,000 asked for by you for these airplanes?

Maj. FOULOIS. Yes, sir; Congress passed the appropriation, and the next step so far as we were concerned was to get under way and try to carry out our end of it.

Mr. FREAR. Now, will you tell the committee what kind of machines, just briefly, were covered by this; what kind of airplanes?

Maj. FOULOIS. In the estimate as I submitted it to Congress the types of aeroplanes specified were the JN-4.

Mr. FREAR. How many?

Maj. FOULOIS. Five thousand. And the DH-4.

Mr. FREAR. How many?

Maj. FOULOIS. Two thousand five hundred.

Mr. FREAR. That is what is known as the De Haviland?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. And what others?

Maj. FOULOIS. The SE 5, a British type, 800.

Mr. FREAR. Yes; and what others?

Maj. FOULOIS. The Spad, 800; the Sopwith, 800. Those were put in the estimate with the primary idea of being produced and used for home and insular service—the Philippines and things like that; we could use a machine if it is not right up to date. These numbers were specified for that purpose, although we fully anticipated and expected we would have to make changes; we had to get our estimates in, but we would make changes.

Mr. FREAR. Could you give me the engines, or did you provide the engines for the JN 4's?

Maj. FOULOIS. We have down here two engines—the A7A and the OX 5, Curtiss.

Mr. FREAR. That is used now?

Maj. FOULOIS. Yes, sir; for the De Haviland, the Rolls-Royce, or the equivalent to it.

Mr. FREAR. That is the one used in England?

Maj. FOULOIS. Yes, sir. The Hispano-Suiza and the Spad, the same type.

Mr. FREAR. And for the Sopwith?

Maj. FOULOIS. The Clerget.

Mr. FREAR. Of course, you figured on an average of two engines to each machine; approximately the double of engines as the number of planes?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That makes approximately 10,000 planes or thereabouts?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What were the remaining planes?

Maj. FOULOIS. We also specified or estimated for the R 4; that was a Curtiss type of plane that we were then using on the border and here in the United States.

Mr. FREAR. What is that; a training plane?

Maj. FOULOIS. Well, it is the same type they are using generally for the mail service to-day, I think.

Mr. FREAR. These other types described were used for the fighting planes?

Maj. FOULOIS. Not necessarily.

Mr. FREAR. The Spad is a fighting plane?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The DH 4, also; although it is also an observation plane?

Maj. FOULOIS. We put below here an amount for the purchase of right to manufacture and complete plans for engines; we did not specify the type down there.

Mr. FREAR. The R 4 Curtiss; how many have you of those?

Maj. FOULOIS. We put in for 200 of those; the R 6 was another type the Navy wanted and was using.

Mr. FREAR. The Curtiss?

Maj. FOULOIS. They wanted them in the water situation.

Mr. FREAR. But the Army approved that; this was an Army appropriation.

Maj. FOULOIS. Yes, sir; an Army appropriation.

Mr. FREAR. How many of those?

Maj. FOULOIS. Three hundred and fifty; and then also 175 Farman seaplanes for water purposes. The next items were items for the purchase of samples of airplanes, and that was to cover the work of the Bolling Commission.

Mr. FREAR. How many were those?

Maj. FOULOIS. It did not specify, it just specified \$240,000.

Mr. FREAR. And the next item?

Maj. FOULOIS. The right to manufacture and complete plans of foreign aeroplanes, \$3,000,000.

Mr. FREAR. For royalties?

Maj. FOULOIS. Yes, sir. And below that we have reconnaissance and artillery control type, 4,000 machines.

Mr. FREAR. They were to be built here?

Maj. FOULOIS. To be built here, and used by our troops in France.

Mr. FREAR. The DH 4 would fill that description, wouldn't it?

Maj. FOULOIS. It would probably fill it. We estimated first getting some of these planes over here and building some of them and if they were second rate types or if we found that the other types had been developed beyond those types, we would put them into our home use; that is in home and insular work.

Mr. FREAR. Let us just for a moment digress; they had as a matter of fact sent a DH 4 over here?

Maj. FOULOIS. I believe they had.

Mr. FREAR. And that was used as a sample?

Maj. FOULOIS. Yes, sir; they were samples of all the planes.

Mr. FREAR. The DH 4 was the first?

Maj. FOULOIS. Yes, sir. Then the 4,000 reconnaissance and artillery type control machines.

Mr. FREAR. And the next?

Maj. FOULOIS. Six thousand, six hundred and sixty-seven fighting planes, and 1,333 bombing planes; that included the total of all the airplanes, 22,625.

Mr. FREAR. Did I get that right, 6,000 fighting planes, even?

Maj. FOULOIS. No, sir; 6,667 fighting planes; and of the bombing planes 1,333.

Mr. FREAR. There was the program for which Congress appropriated \$640,000,000 on the items and the statement which you submitted for 22,625 airplanes; now what happened after that?

Maj. FOULOIS. That, of course, simply represents approximately half of the whole appropriation. The second and third sheet go into a great many other items of the appropriation.

Mr. FREAR. That took about \$320,000,000?

Maj. FOULOIS. The estimated total of that was \$363,140,000 for airplanes and engines alone.

Mr. FREAR. There is a very interesting statement which appears in the Hughes hearings, from Mr. Borglum, wherein he says that Mr. Deeds, who was then in the city of Dayton, told him that practically half of the \$640,000,000, or \$320,000,000, in round numbers, was to be spent for airplanes, and I asked that question of the Secretary of War and he did not know, and we did not have any connection with that before. You estimated a little over one-half was for airplanes?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Did we get out 22,635 airplanes?

Maj. FOULOIS. Not to my knowledge.

Mr. FREAR. Then, tell us what we did get, because Congress did its share, did it not? This money was appropriated without question, and it was the most unusual experience this country had ever had. This money was appropriated without a single inquiry by Senators or Members or request for information. We appropriated it and none of us knew, or, at least, many of did not know what it was appropriated for. We gave it ungrudgingly. What did we get for our money?

Maj. FOULOIS. I am afraid I can not tell you.

Mr. FREAR. Were these recommendations of yours followed up?

Maj. FOULOIS. They were followed out up to the time I left for France, in the latter part of October, 1917.

Mr. FREAR. How many planes had been delivered in Europe at that time?

Maj. FOULOIS. No American built planes. In fact, no planes had been delivered there, to my knowledge.

Mr. FREAR. Here were 6,667 fighting planes included in that order. How many fighting planes had been delivered in Europe at that time?

Maj. FOULOIS. None.

Mr. FREAR. There were none at the front up to the time of the armistice?

Maj. FOULOIS. Up to the date of the armistice?

Mr. FREAR. Yes, sir.

Maj. FOULOIS. American built?

Mr. FREAR. Yes.

Maj. FOULOIS. No.

Mr. FREAR. How many fighting planes have ever been delivered in this country?

Maj. FOULOIS. I have no knowledge of that. I assume none have been delivered in this country.

Mr. FREAR. How many bombing planes? You have 1,333 here.

Maj. FOULOIS. Were delivered in France?

Mr. FREAR. Either in France or here.

Maj. FOULOIS. Strictly speaking, there were none delivered to us over there, although we use the DH-4 for auxiliary purposes.

Mr. FREAR. There were 4,000 reconnaissance and control planes.

Maj. FOULOIS. You might consider the DH-4 in that class.

Mr. FREAR. But we only had 213 over there. Here are 4,000.

Maj. FOULOIS. That is the class in which the DH-4 belongs, in the reconnaissance and artillery control class.

Mr. FREAR. On the original list you put after the 5,000 JN-4's, 2,500 DH-4's?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. That is another item?

Maj. FOULOIS. That is another item.

Mr. FREAR. But we only had 213 on the front altogether?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Did we have many here?

Maj. FOULOIS. I am not sure.

Mr. FREAR. I think we put the total in the record this morning.

Maj. FOULOIS. They had some more. There were a greater number of DH 4's in France than on the front. They were coming in all the time. They should be on record.

Mr. FREAR. That was not a fighting plane?

Maj. FOULOIS. The DH-4.

Mr. FREAR. No; it was not a bombing plane.

Maj. FOULOIS. I am keeping it in its own class. It was a reconnaissance plane.

Mr. FREAR. The testimony before this committee is that it took 45 minutes to reach its ceiling and that only gave it an hour and a quarter with the balance of its gasoline for its other purpose.

Maj. FOULOIS. Its purpose as a bombing plane was limited.

Mr. FREAR. It was not called a bombing plane by anyone.

Maj. FOULOIS. Its proper classification is as a reconnaissance or observation plane.

Mr. FREAR. Then you did not follow the program any further; you went over there?

Maj. FOULOIS. No, sir. I left here after putting everything as nearly in shape as possible in connection with our original policy. I left here the latter part of October for France to complete that end of it over there.

Mr. FREAR. If you had remained here on the job instead of being sent over there, what would you have done with this program, if you had had an opportunity to carry it out?

Maj. FOULOIS. That is a pretty hard question to answer.

Mr. FREAR. Would you have carried it out?

Maj. FOULOIS. I would have done the best I could to stick to it.

Mr. FREAR. The figures you gave there were the best reasonable values for the machines?

Maj. FPULOIS. They were the only figures we had, and we got them from the best information we could get.

Mr. FREAR. And those estimates were reasonable estimates according to the information we had from the French in this country as to the cost of production?

Maj. FOULOIS. They were the only estimates available at that time. I think we had the best information that could be gotten anywhere.

Mr. FREAR. Were those estimates reasonably accurate, did you believe?

Maj. FOULOIS. I think they were; and I have since learned that they hit it very closely.

Mr. FREAR. You found out afterwards that you did hit those estimates very closely?

Maj. FOULOIS. I have heard since I came back that they came very close to our estimates.

Mr. FREAR. If you had been given an opportunity to carry that out, it would have been a question of time of production, rather than a question of cost, since you had estimated a sufficient amount?

Maj. FOULOIS. I had never any doubt that the program would take longer than June 30, 1918.

Mr. FREAR. And it could have been built under the appropriation of \$640,000,000?

Maj. FOULOIS. Without question. I think it would have been behind it, and it would have come through.

Mr. FREAR. If, then, Congress gave \$640,000,000 on your estimate and we got 213 planes six months afterwards, for use on the front, you would call that getting money under false pretenses, would you not?

Maj. FOULOIS. There was something wrong somewhere.

Mr. FREAR. Who is responsible for it?

Maj. FOULOIS. I am sure I do not know.

Mr. FREAR. Of course, we realize that an Army officer is not supposed to pass criticism upon his superiors or anyone else. This is the situation which confronts the country, that there was an estimate of \$640,000,000 for a specific number of planes which should have been built, and for that amount we got at the front 213 planes; and 640 counting the Spads and others built in France that we bought from them.

You were over there. Do you know whether or not the French were needing all the planes they could produce?

Maj. FOULOIS. I think that is a fact, without question, because I did all the preliminary work. I had all the preliminary fights with the French from the time I arrived until I was sent to take charge of the work at the front, and Gen. Patrick took over my office.

Mr. FREAR. Was Col. Dunwoody with you?

Maj. FOULOIS. He was with me.

Mr. FREAR. The testimony of Congressman LaGuardia, who was a flyer on the Italian front, was to the effect that Col. Dunwoody and yourself, I believe, had done everything you could—I do not know whether he used the word "steal"—to borrow and beg machines from the French for the use of our American aviators. That is right, is it—you used every effort you could?

Maj. FOULOIS. We did. We had to do more than that. We had to fight with the French to get what we wanted, and we had to insist in order to get our own people to live up to the agreement with the French, so that we could have deliveries from the French.

Mr. FREAR. In other words, France was working to the limit, as was every other Government; and we had to put ourselves in the

attitude of insisting that France should give us their machines when they needed them for their own use?

Maj. FOULOIS. That is the fact.

Mr. FREAR. That meant the lives of thousands of men, did it not?

Maj. FOULOIS. I do not know whether—

Mr. FREAR (interposing). Who is at fault because of the failure of this program?

Maj. FOULOIS. I want to say this: That the fault was not with us in France; with our efforts in France.

Mr. FREAR. I am sure of that. The testimony is unanimous that the American aviators were the equal of any flying men the world over. What became of the promise made to the French Government that we would furnish them 5,000 pilots and 50,000 mechanics by May 24, 1917?

Maj. FOULOIS. I think that went where everything else did. We never carried it out.

Mr. FREAR. Did you ever hear any explanation made of that? That was the promise made to them by us, and they needed all the help they could get. What attitude did the General Staff take about this time on these aviation questions? What control did they exercise over the subject?

Maj. FOULOIS. Here in the United States?

Mr. FREAR. Yes.

Maj. FOULOIS. I do not know just exactly what the attitude of the General Staff was. I am not qualified to say. I have never been able to find out what their attitude is, definitely.

Mr. FREAR. Let me say this to you, because this may relieve your peace of mind, if you have any hesitation at all. The Secretary of War, testifying before this committee, said no man in the service, either private or officer, need have any hesitation in telling the truth under oath. That came out in the discussion of the spruce situation, when Maj. Ray told a witness before he was sworn that anything he said might be used to incriminate him. The Secretary of War said there would be no question raised in regard to any criticism in reference to any policy, or anything that was said, if it was the truth and the judgment of the officer.

Maj. FOULOIS. I would like to state in connection with that, that it is immaterial to me whether the Secretary of War made that statement or not. If I am under oath before this committee and am giving testimony to the committee, I will tell the truth—

Mr. FREAR (interposing). I am sure you will.

Maj. FOULOIS (continuing). Whether it hurts the General Staff, or whoever it hurts, or whether it is in defense of them. That is all I expect to do before this committee, and if the questions are in such form that I can answer them by telling the truth, I will do it.

Mr. FREAR. This committee has in you one of the able men who had direct connection with the Air Service not only during the war, but prior to the war. You were in close touch with it; you made the estimates that were submitted to Congress; and, in view of your estimates, we appropriated \$640,000,000 for the Air Service.

I want to know from you what is the attitude of the General Staff, or anyone else, that resulted in the failure to carry out this program and this promise made to the American people, as well as the promise made to our allies.

Maj. FOULOIS. In connection with this estimate and with what is known as the \$640,000,000 aviation bill, I was charged with drawing up the estimates and working out all the details of it and presenting it to the General Staff for discussion and consideration and the necessary approval before submitting it to the Congress.

From my experience in handling that bill and the estimates before the General Staff, as it then existed, at the Army War College, Washington Barracks, my personal opinion is that they either did not evidence the interest they should have evidenced in the development of aviation, through lack of knowledge or through lack of interest. In my opinion, my personal opinion of the matter is that they did not particularly care to see that bill put through.

Mr. FREAR. That is, the \$640,000,000 bill?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. What leads you to say that?

Maj. FOULOIS. The attitude of a great many members of the General Staff. In the discussions which I had at the War College in handling this work——

Mr. FREAR (interposing). What was their attitude, what did they have to say, and what were the reasons advanced?

Maj. FOULOIS. They had no reasons to advance particularly, because I could usually outargue them on the aviation side of it. They knew nothing about it.

Mr. FREAR. And you knew what you were talking about?

Maj. FOULOIS. Yes. It was apparently a policy of delay. It took six weeks to get it out of the War College.

Mr. FREAR. To get this appropriation bill, this \$640,000,000 bill, out with their recommendation?

Maj. FOULOIS. Yes, sir; it was approximately from four to six weeks down there before it was finally brought to Congress.

Mr. FREAR. Was it brought up for consideration frequently?

Maj. FOULOIS. As frequently as we could get it up down there. I spent most of my time down there. There were a number of officers interested in it, but they were in the minority. It was a constant fight, item by item, and I had to go all the way through it like that.

Mr. FREAR. Of course, time was essential.

Maj. FOULOIS. It was a most important thing; in fact, it was the most important thing about it at that time.

Mr. FREAR. That was the most important feature that confronted us?

Maj. FOULOIS. Yes.

Mr. FREAR. And it took from four to six weeks?

Maj. FOULOIS. Approximately, to pass it through the War College, before it was disapproved.

Mr. FREAR. If this is too direct a question I wish you would say so, but I would like to know those who opposed it here.

Maj. FOULOIS. I have no recollection. As I recollect it, I was barred from the final sitting.

Mr. FREAR. Who did decide finally?

Maj. FOULOIS. Perhaps I may be permitted to give you a little history of the work I had to do before the War College. I had practically a half a dozen or a dozen conferences on the main items, and then had to go into a long detailed explanation of practically

everything there was about it. It was brought up finally before the War College, sitting as a sort of committee of the whole.

Mr. FREAR. Will you state briefly to the committee—because I, at least, have no information about it—how the War College is composed? What officers is it composed of, and how large is it? Just state that briefly.

Maj. FOULOIS. I do not remember exactly. The War College was commanded at that time, I think, by Gen. Kuhn, and consisted of approximately 75 officers of all branches of the service except the Air Service. As a rule, I have never known of an officer of the Air Service being on the General Staff.

Mr. FREAR. Do you remember the arguments made against the Air Service appropriation?

Maj. FOULOIS. No, sir; there were no specific arguments. The principal argument, I remember, was by one of the General Staff officers, whom, I think, afterwards had a good deal to do with the munitions board, and that argument was along the line of the enormous amount of material we were going to take out of production for the aviation work. The argument was that the amount of material that would have to be put into this program would affect everything else in the United States.

Mr. FREAR. And they feared it would affect some other program?

Maj. FOULOIS. It was along this line, that it was a great expense, because they could not get a logical argument with which to oppose it, and it would have to be entirely on matters of detail.

Mr. FREAR. When was the bill approved by the War College?

Maj. FOULOIS. The bill was not approved by the War College.

Mr. FREAR. What was their action?

Maj. FOULOIS. The estimate as submitted, and also the bill which was drawn for the purpose of creating an organization—there were two separate items. They had two bills, one an appropriation bill and the other an organization bill. The War College, I think, in secret session—I was barred from it, although I asked to be present—disapproved the organization bill.

Mr. FREAR. Tell us briefly what the organization bill was.

Maj. FOULOIS. It provided—it afterwards was blended with the appropriation bill, and came out as the ultimate bill. It provided for the organization, for the men, and everything else in the organization, as well as for the money to carry out the program. I think that was done in the committee here, after that.

Mr. FREAR. In the House committee?

Maj. FOULOIS. Yes; in the Committee on Military Affairs.

Mr. FREAR. But you say the War College opposed the organization bill?

Maj. FOULOIS. The War College disapproved the organization bill.

Mr. FREAR. Why?

Maj. FOULOIS. I have no idea, sir.

Mr. FREAR. Did they eventually oppose the granting of the \$640,000,000 appropriation?

Maj. FOULOIS. In so far as I know; after this final conference I had at the War College I returned at once to the War Department, and I was informed of this decision before I left down there. I was told on the outside, was informed of the opposition of the War College, and was told that the committee had decided to disapprove

it. I proceeded to the War Department and notified the Chief Signal Officer that that action had been taken. That was rather late in in the evening, and I heard nothing more until the next morning. In the meantime I think some one from Congress probably had learned something about this, and called for it—called on the Secretary of War for it.

Mr. FREAR. For the bill?

Maj. FOULOIS. For the bill, and all the work that had been done on it. I was sent up with it, with Gen. Squier, and in the hearings they took the two bills and merged them into one, which was ultimately approved.

Mr. FREAR. As a matter of fact, this question of disturbing the industries must have been settled to their own satisfaction, or they must have found there was nothing serious in it, by agreeing to it.

Maj. FOULOIS. We worked out every detail. We were before the War College and before the committees—the different committees there. Mr. Coffin was down there a number of times; and members of the War Industries Board were present, and everyone who knew anything about how this program affected the industries of the United States was consulted in reference to that subject. I mention that one instance as showing how one of the matters was discussed. I have here with me my other papers, some papers in regard to some of the discussions I had with the War College down there.

Mr. FREAR. In regard to this bill?

Maj. FOULOIS. In regard to the bill as it was originally submitted. The greatest difficulty I had was the delay, the time spent in getting this through.

Mr. FREAR. That is the time of four to six weeks you speak of?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Is there anything there you think would be of value to the committee as disclosing the condition of things at that time, as a matter of permanent record?

Maj. FOULOIS. There is only one thing in here that I think might give an outline as to some of the difficulties we had to encounter. That is an argument I made before the War College.

Mr. FREAR. Briefly, what were the points raised?

Maj. FOULOIS. There are two or three pages here.

Mr. FREAR. I was wondering what the points were they had raised that you were trying to meet at that time.

Maj. FOULOIS. I would rather read this over. We discussed this organization bill, as it had been drawn up and commented on it.

Mr. FREAR. What was the objection to that organization bill?

Maj. FOULOIS. As it was drawn?

Mr. FREAR. Yes; as mentioned there. Why did they not want it?

Maj. FOULOIS. They brought no particular objection actually against it. It was more a question of detail. It was a question of whether we had too many men, and a question of rank; in fact, every feature about it had to be argued and had to be discussed.

Mr. FREAR. You say the General Staff here did not approve it. What was the situation in Europe?

Maj. FOULOIS. As regards—

Mr. FREAR (interposing). The aviation branch of the service.

Maj. FOULOIS. Just how do you mean?

Mr. FREAR. I mean in regard to the action of the General Staff, whether you received assistance. I do not know, and I am asking in order to find out.

Maj. FOULOIS. My experience over there—I was the responsible officer under the commander in chief. When all these troubles had to be straightened out—my experience over there was that they had to be educated to a great extent. Certain members of the General Staff were willing to be educated, but that was a very small minority. Other members were more or less disinterested, and a certain proportion were opposed to aviation.

Mr. FREAR. What was that opposition grounded on, so far as you could tell?

Maj. FOULOIS. I have never been able to find out, except here and there. There were a great many difficulties I had over there in regard to getting things done; and we would hear constant complaint about these young aviators running wild all the time, and too much rank, and a great many features of that kind.

Mr. FREAR. The old question of jealousy which naturally arises in the Army had reached that point, too.

Maj. FOULOIS. In my 21 years of service I have never seen it more prevalent than it is to-day.

Mr. FREAR. But, of course, you did receive some support from our officers?

Maj. FOULOIS. Gen. Pershing, in my opinion, is the best friend aviation has in the Army. If it had not been for him, on a great many occasions, we would not have had any Air Service. No one human being could have taken all the responsibility placed on the men there. There were heads of various departments, and the heads of the departments are the men primarily responsible, in my opinion, for the entire working, or the failure, of anything that went on over there.

Mr. FREAR. His judgment of you was shown by the fact that he allowed you to send cablegrams—and I am not saying this for the purpose of drawing any answer particularly—he allowed you to send the cablegram in regard to the defects on the De Haviland 4.

Maj. FOULOIS. He had to absolutely depend upon my judgment and responsibility.

Mr. FREAR. And he was willing to do so?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Did the opposition over there, outside of what you spoke of in getting through the appropriation of \$640,000,000 in this country, have any effect in delaying our aircraft program; and if so, in what particular would you say?

Maj. FOULOIS. One of the most vital effects on our operations over there I criticize the General Staff for.

Mr. FREAR. What was that?

Maj. FOULOIS. For the failure to get our men over there in plenty of time.

Mr. FREAR. That is, to get the people across the water?

Maj. FOULOIS. To get the Air Service men when needed over there in ample time to train them and to get them in shape, ready to take the planes out.

Mr. FREAR. That was pursuant to our promise to the French?

Maj. FOULOIS. Yes, sir. Of course, that was also for our own interests, to get our men in the service. Up to May of 1918 we had the greatest difficulty in getting the finished material to make the French planes of every description, for training purposes as well as for combat purposes, due to the fact that the French had contracts with us for the delivery of raw materials.

Mr. FREAR. We were to deliver raw materials to them for the manufacture of the air planes?

Maj. FOULOIS. We were to deliver raw materials to them, replacing the equipment we would take from them, and that was the crux of the whole situation all through the early months, the winter and early spring of 1918. We had to have the raw materials over there, and we had to get the raw materials to the French in order to get our share of what they were going to utilize there.

Mr. FREAR. In exchange?

Maj. FOULOIS. Yes.

Mr. FREAR. Did you get them over there?

Maj. FOULOIS. It was not until May, 1918, that we got sufficient raw materials over there, about 85 per cent, to give me enough of a club to go to them and say, "You have got to deliver the goods to us." We finally got a new contract, through this club, to the effect that they would turn over to us the necessary aviation equipment, plus the increased amount necessary in accordance with the size of our divisions, which were practically, or approximately, twice the size of their divisions, and the new contract was to the effect that they would turn over to us sufficient equipment—that is, aviation equipment—for every division that we would put into the line. They were living up to that and the time came when we could have gotten airplanes in addition to what we got from the French, but we did not have the men to command them and to man them.

Mr. FREAR. That was the failure on this side?

Maj. FOULOIS. It may have been the failure on this side, but it was incidentally the failure on the other side, in view of the fact that I continually pounded, month after month, to get our men over there, in advance of this period when I knew we would get planes and get them into our shops and depots and training schools, so that they could have sufficient training in France before we could turn the planes over to them. The French said, "You have not got your men here. We want to use these planes." They knew we did not have the men ready to take hold of them. That is why I tell you of the lack of getting our enlisted men over there and training them and getting them into squadrons, so that they could go wherever they were to be used. I fought and fought and fought for months with one section of the General Staff that had to do with the shipping of personnel to get men over, without results.

Mr. FREAR. Did they finally permit you to get them?

Maj. FOULOIS. The time I wanted them most was before the spring offensive. Everyone knew there was going to be an attack. It was pretty well known that when the Germans did make the big attack, which they ultimately made, everything would have to be thrown into combat troops on the ground, and during November, December, January, and February I was pleading for men and trying to get them over there, to get them trained to meet the program,

Mr. FREAR. The contract was renewed for 1,000 Spads, but a long time afterwards, and he speaks of it here in his report, "after a delay of six months."

Maj. FOULOIS. I can probably give you a little light on that. It was several months before I found out in France that the Spad contract had been canceled. I immediately, I think, along in—probably around about May, took steps to organize a board of officers over there to investigate all the latest types of planes and to try to determine what our probable program would be for 1919. We knew all the types that were in use then would probably stay in use throughout 1918; but we wanted to see what the Allies were doing in connection with the new types. About that time the board started its investigation, when we learned of the cancellation of the Spads in the United States; I think that was on a cablegram I sent some time in April or May—I am not certain of the time, but I am positive I sent a cablegram recommending that they build a thousand—

Mr. FREAR (interposing). Let me read here a brief reference which I think is of interest in regard to the Spad contract. Judge Hughes, under the heading "Suspension of the program of the single-seater pursuit planes"—that is what the Spad is?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. Judge Hughes says:

It should be noted that virtually all the cables of advice sent by our military representatives abroad are signed "Pershing," but doubtless they most frequently come from subordinate officers, and with respect to the subject under consideration, from those in charge of the Air Service overseas: In a cablegram received here on October 5, 1917, the following appears:

"If U. S. A. 8 cylinder heavier than Hispano Suiza pounds per horsepower, build no monoplane pursuit airplanes with U. S. A. 8 cylinder engines. Machine will be useless by time it arrives here. Increase number DH-4's or DH-9's by number monoplane pursuit airplanes. This is necessary provided U. S. A. 12 is success."

I suppose that refers to the Liberty engine?

Maj. FOULOIS. Yes, sir.

Mr. FREAR. The cablegram goes on:

Useful loads increasing so rapidly here that engines now in United States are not considered powerful enough to meet requirements. Two-place pursuit airplanes considered most urgently needed airplanes next year.

Judge Hughes himself goes on to say:

The view thus set forth found support in influential quarters here. On October 27, 1917, Lieut. Col. Clark in a memorandum sent to Mr. Coffin expressed the opinion that "all fighting and bombing by day will be done in two-seaters flying in regular formation." And he added, "the single seater will be eliminated."

A few days later the following cablegram was received:

This is the very interesting one, if I remember rightly. It is dated November 8, 1917, and it says:

Your 359, paragraph 7, and other cables concerning American engine program. Situation here has changed much during three months since original recommendations and continues changing constantly. Following general principles appear clear to us:

First. Single-seater fighter will probably become obsolete general use next year, although small numbers will always be used special purposes. Recommend you produce number already actually under contract and started.

That was the 3,000.

Believe we can obtain here all this type required future above number actually under contract here and America.

That was 3,000 here and then this contract for a thousand there.

This applies both single-seater fighter airplanes and engines.

Second. Two-seater fighter airplane with stationary engine will supersede single seater. Four hundred horsepower probably sufficient next six months, after that 500 horsepower necessary. This summarizes cables already sent you.

And Judge Hughes says:

It will be observed that while this message recommended against further production, it distinctly stated that the number already under contract and started should be produced. But this was not done.

Here was a cablegram sent in the following month, on November 8, which told the people here to continue with the manufacture of those Spads, and we never manufactured a Spad that went over. That was a very important time in the history of the war, of course, because it would mean delay and, as I now remember it, before we really did get down to the manufacture of the 1,000 you speak of there was a delay of six months.

Maj. FOULOIS. It meant a delay in getting fighting planes in France.

Mr. FREAR. If we had had at that time the 3,000 Spads, we would have been almost as well provided as the French were, with their 3,300 on the front, as Gen. Patrick testified.

You have had active participation in this aircraft work since the very beginning, and Gen. Pershing imposed great confidence in you. What, in your judgment, is to be recommended by this committee, if any recommendations are made toward the strengthening of the aircraft program for this Government, if that should devolve upon us?

Maj. FOULOIS. You mean in connection with the future development of aviation?

Mr. FREAR. In connection with the Army or in connection with purposes of general use for the Army or the Navy, or in any way you have to suggest.

Maj. FOULOIS. In my opinion the only future for aviation in the United States is in concentration under a separate control. Everything we have, military, naval, or commercial, and any other features in connection with aviation, ought to be put together under one head somewhere. I do not see how it is going to keep abreast with any of the foreign nations unless we do that, and it is going to be built up. In time of peace the only function for aviation is its commercial development.

Mr. FREAR. Are we ahead or behind other countries at the present time in aviation?

Maj. FOULOIS. I consider that we are behind all the first-class powers to-day in aviation. I had hopes when the war broke out that we had a basis under the \$640,000,000 bill, that there would be something left for future development, and I hoped we would have an aviation development in the United States equal to, or better than, that of any other country.

Mr. FREAR. Let me suggest something that was presented to us before you came here this morning; that on August 29, 1916, there was an appropriation of \$13,281,660 for aviation. That was in the fall before. On February 14, 1917, just before war was declared, Congress appropriated a large amount for seacoast defense, and then, coming down to May 12, 1917, and October 6, 1917, there were two

appropriations, approximating \$50,000,000, \$10,800,000 at one time and \$40,000,000 at another time. Those appropriations were made independent of the \$640,000,000 appropriation, and up to October 6, 1917, we had appropriated \$48,800,000, so Congress was not niggardly with that service. Then on June 15, 1917—that was before the large appropriation was made—Congress appropriated \$43,450,000 and then, inside of six weeks from that time, Congress made the big appropriation of \$640,000,000 addition; so that within four weeks practically \$700,000,000 was appropriated, and shortly before that there was appropriated approximately \$48,000,000. So that we have in Congress done our part in furnishing funds. What had other countries done? Have they done anything better than that?

Maj. FOULOIS. Not in so far as spending money is concerned, I think, during the last year or two. Of course, if we go back in the first 9 years of aviation, I think we got something like \$1,000,000. There used to be a fluctuating situation, where we first had no men and then had no money.

Mr. FREAR. After the European war was on, and for a year and a half during the war that was a very important branch of the service.

Maj. FOULOIS. I do not think anybody can criticise Congress since the war for the amount of money appropriated, and I hope Congress will go on, so we can continue to build up the service, because I do not think anybody else will build it.

Mr. FREAR. It will require some encouragement, and you are familiar with what has been done in the past, and made the estimate on which the big appropriation was based, and that is why I ask what your suggestion of a program would be.

Maj. FOULOIS. I would suggest this to start with: That the poor flying men be given a chance to apply the new term of self-determination.

Mr. FREAR. In what respect?

Maj. FOULOIS. To express their opinion, open and above board, without the fear of incurring displeasure or any other punishment.

Mr. FREAR. Is that not permitted to-day?

Maj. FOULOIS. It may be permitted to-day; it is being used in this committee to-day, but it is the first time I have ever seen it done in that way.

Mr. FREAR. The Secretary of War told us that anyone who testified before the committee, any private or officer, was fully expected to tell the truth under all circumstances, and was not to be intimidated in any way, even by the suggestions made by an examining officer that whatever a witness might say might incriminate him.

Maj. FOULOIS. I make this statement in the interest of aviation, with which I have been connected for about 11 years. I have devoted my own energies, and half of my military service, and a lot of my personal funds, to see this service built up, and I have had one ambition in all this work, to see the service built up for the use of the Government in time of war.

Mr. FREAR. Have you any suggestion to make that would be of value to the committee?

Maj. FOULOIS. The only suggestion I have is that I hope Congress will pass a bill which will consolidate every air service activity under one control.

Mr. FREAR. There have been two bills in the House and Senate, I think. I believe there is at least one bill proposing that the air service be established as a separate branch of the Government, with its head as a member of the cabinet, and providing that assignments be made from that branch of the service to the various departments of the Government that would be concerned with aircraft.

Maj. FOULOIS. I make this suggestion, and I earnestly hope I will have a chance to give my experience in connection with it, because it is not a particular criticism of the Army or Navy or other departments; but I have had 11 years' experience trying to build it up, and I say frankly that the most opposition I have ever had in connection with the building up of aviation in the Army has been from the Army itself.

Mr. FREAR. You explained that you had it with the War College here, and you had it in the General Staff there.

Maj. FOULOIS. That has been my experience ever since I have been in it, that it had to be forced and pushed and developed by actual fighting against the rest of the departments in the Army—

Mr. FREAR. You are satisfied—

Maj. FOULOIS (interposing). In addition to that, in connection with the Navy operations, there are certain features I have a great deal of respect for in connection with the Navy. They know how to get things. They are working for the Navy all the time, and they get things done. I predict this: That unless you do get the different elements of aviation in the United States together, the Navy will be running it itself inside of the next three or four years; and I will be very glad to serve under them if they can handle the job.

Mr. FREAR. The effect in the past has been practically competition in many cases between the Army and the Navy in the matter of production.

Maj. FOULOIS. We were not only in competition with them, in my opinion, but we were disorganized, disorganized in our own organization to a great extent. I can certainly appreciate Gen. Menoher's situation in trying to handle the Air Service. I have had a lot of experience in it, and there are as many factions in the United States Army as there are differences of opinion on the league of nations.

Mr. FREAR. In other words, you say that Gen. Menoher has fallen heir to a good many things for which he is not to blame?

Maj. FOULOIS. I told him I wanted to help him because I had appreciated some of his difficulties. It is the future of aviation I am looking to. I do not see any future for aviation in the United States at the present time unless we get together. There is one fundamental military principle that must be realized and appreciated, and that is that you can not get authority and responsibility scattering it around the country, but you have got to have it under one head, and that is what we have not got. France, England, Italy, and all the bigger countries are either coming to that or have come to it; and they are doing it entirely in connection with the peace-time development of aviation. From a peace-time standpoint, our policy is defensive entirely; and aviation has to be developed commercially, because that is its function in time of peace. It has got to be developed in this country from the standpoint of its commercial value. That is why, if we are going to keep abreast of any of the countries abroad, we have got to get to the commercial use of it; and I do not see that the Army

or Navy know much about the commercial use of aircraft. We had better put it under somebody who does take an interest in the commercial side and let us help them.

Mr. FREAR. You do not see anything impractical in having the commercial, the military, and the naval interests combined under one control?

Maj. FOULOIS. I can not see anything that could not be solved under a central control, military, naval, or civil. It does not make any difference to me. Let us get it under one control.

Mr. FREAR. Where there will be some responsibility fixed?

Maj. FOULOIS. Where there will be some responsibility fixed. As it is, I predict, and I stated in a memorandum I sent to Gen. Patrick, that I figured that aviation, as a popular subject in the United States, is going to be before the country for many years. And it is also going to be a popular subject for investigation. Let us hope that the investigation will determine that there is one thing which ought to be done, and that is to have one responsible head, so that if anything goes wrong you will know where to place the responsibility, and you can take off that head if you want to, which you can not do when you have it under 12 or 15 different heads.

Mr. FREAR. There is need of an investigation in regard to this appropriation and the lamentable failure all the way along the line in results?

Maj. FOULOIS. If you get the facts and a few names you can probably run some of these things down, but if it is under one head to go to, instead of having the head of the Army aviation and the head of the Navy aviation and the head of the Post Office Department branch of aviation, you would get results and the patience of the country would not be very nearly exhausted before you got through.

Mr. LEA. Are you familiar with what appropriations are made by France and England for the coming fiscal year for aviation?

Maj. FOULOIS. No, sir. I do not know whether I am making this statement in connection with the policy in England. England has never forgotten during the entire war what she intended to do after the war. Her policy, as far as I can gather, and I have associated with them a great deal, was to have a big navy and a big air service. That means big appropriations. France, Italy, and the rest of the countries have naturally got to follow her lead. The only difficulty they are going to have is the question of how much they can appropriate. Those countries economically are in pretty bad shape.

Mr. LEA. What size appropriation do you think would be advisable to provide for this fiscal year?

Maj. FOULOIS. I think Mr. LaGuardia put that very nicely when he said we had better not provide any more than we think we can use. I have not had any opportunity to go into any of the work we have planned, if there is any planned. One of the points about which I was very careful in my estimate was this: We did not submit anything until we had a pretty good idea of how we were going to spend the money.

Mr. LEA. What time were you connected with the Air Service in France, as chief of that service?

Maj. FOULOIS. I think I was appointed chief of the Air Service on November 27. Approximately between the 1st of December, 1917, and the 1st of June, 1918.

Mr. LEA. Did you voluntarily retire?

Maj. FOULOIS. No, sir; not at first. I might qualify that by saying that I did; yes. My original policy that had to be drawn up in connection with this work provided for the development work over here, and then to proceed to France to build up the work in the S. O. S., the development of the Service of Supplies in the zone of advance, and then the operations with troops. Four functions had to be carried out. After I left here, and did the work in the main S. O. S. in France, I was also charged with the handling of the question of raw materials for aircraft and such contracts that had to be handled with the Allies in connection with their supplies from the United States. That kept me occupied most of the time, and I made repeated requests of Gen. Pershing to be relieved of that work in order to carry out the military work, although some one had to watch it who knew the different features of the work over there. Based on those requests, Gen. Pershing decided that I ought to go to the front to handle the work up there. But he wanted one head of the Air Service, and he said he would put Gen. Patrick in, and that pleased me, because I wanted somebody who could watch the delivery of the raw materials and also look after the other work under Gen. Patrick, and I wanted to get up to the front and build up the other work.

Mr. LEA. During the time you were chief of the Air Service you were practically unhampered in performing your duties?

Maj. FOULOIS. I should not say so. I think I was considerably hampered in every possible way I could be.

Mr. LEA. There were a good many charges of disorganization and disruption of the service there during that time.

Maj. FOULOIS. We were about as thoroughly disorganized when we got over there as we could possibly imagine.

Mr. LEA. You went over in November, 1917?

Maj. FOULOIS. On November 12.

Mr. LEA. Then there was more or less disorganization in the service until you were relieved as chief of the Air Service?

Maj. FOULOIS. When I turned over the Air Service organization to Gen. Patrick I turned over a complete machine in running order.

Mr. LEA. Was not the reason for making the change to try to get more organization and unity in the service over there, and was not that really the cause of your being taken from the service?

Maj. FOULOIS. Yes; it was an absolute necessity and it was a thing that in my opinion there was no question on my part about. I was very glad to do it, and felt that I was of more value to the organization at the front at that time than I was back.

Mr. LEA. But personal controversies had developed between yourself and others that were relieved to some extent by the change. Is not that the fact?

Maj. FOULOIS. I would not be a bit surprised. There were quite a number of controversies going on at different times.

Mr. LEA. Those whom you criticize to-day were those who took different views from yourself?

Maj. FOULOIS. I do not know that I criticized anybody. I hope I have not. I had not intended to criticize anybody over there.

Mr. LEA. There was that condition of dissension and personal controversy.

Maj. FOULOIS. The only criticism I made was of the General Staff.

Mr. LEA. Did the Air Service have a representative on the General Staff at the beginning of the war?

Maj. FOULOIS. No, sir.

Mr. LEA. Has it at the present time?

Maj. FOULOIS. No, sir.

Mr. LEA. It has been a separate service, you say?

Maj. FOULOIS. The Air Service has been separate. We have had no—we had over there for a while several officers who were detailed from the Air Service to the General Staff, or attached to the General Staff, not detailed.

Mr. LEA. So when you went before the General Staff to get the approval of this appropriation you were not a member of the General Staff?

Maj. FOULOIS. No, sir.

Mr. LEA. And you were not ordinarily entitled to admission to their secret sessions?

Maj. FOULOIS. Very likely. I was not admitted, I know.

Mr. LEA. As I understand from your testimony the organization bill you proposed, while not recommended separately, was in fact adopted as a part of the appropriation bill?

Maj. FOULOIS. It was submitted to the Army War College in two pamphlets, one in the form of estimates, which I have here, and the other in the form of a bill for increasing the efficiency of the Army, which simply provided for the personnel.

Mr. LEA. As a final proposition the two were adopted?

Maj. FOULOIS. They were merged together by the House Committee on Military Affairs. They put the two together and rewrote it, and it came out in the form of the \$640,000,000 bill, which provided for both the personnel and the money.

Mr. LEA. Looking back at the situation, you having been a student of aviation for as many years as you had, you went into the General Staff, which had not been intimately connected with the question of aviation with this program for an appropriation of \$640,000,000 when all these other programs were being crowded upon the General Staff. Do you consider that the delay in adopting that program, being no longer than it was, indicated any improper motive on their part?

Maj. FOULOIS. I would not say that; no, sir; I have no evidence to show that there was a deliberate delay in that.

Mr. LEA. It resolves itself rather into an honest difference of opinion, does it not?

Maj. FOULOIS. Exactly.

Mr. LEA. Yes; so you thought they did not accept the program you suggested as readily as they should have?

Maj. FOULOIS. That is my opinion; yes, sir.

Mr. LEA. So that your criticism along that line does not go to the integrity of these men?

Maj. FOULOIS. Absolutely not.

Mr. LEA. When you finally made out the estimate for this program, you recognized that it would not be completed by the 1st of July, 1918, did you not?

Maj. FOULOIS. I was pretty certain. As I stated at the start of my testimony we had to draw upon our imaginations pretty thoroughly in connection with what we could expect to do. No concern had ever tried to draw up anything like this before, and from my own experience and knowledge in the building of airplanes I thought it was pretty doubtful whether it could be done.

Mr. LEA. You had a difficult task to anticipate in the first place what you should do?

Maj. FOULOIS. Most difficult.

Mr. LEA. And in the next place to anticipate what you could do?

Maj. FOULOIS. Yes, sir.

Mr. LEA. There never was any doubt about the desirability of the planes over there?

Maj. FOULOIS. Never.

Mr. LEA. Nobody could dispute that?

Maj. FOULOIS. That is a fact.

Mr. LEA. As to what you wanted to do, subsequent events showed, in substance, that it was desirable to accomplish what you wanted to accomplish, broadly speaking?

Maj. FOULOIS. Yes, sir.

Mr. LEA. Before this program got into a very good start you were taken to France?

Maj. FOULOIS. Yes, sir.

Mr. LEA. In fact, if you had no connection with the production end of it at any time?

Maj. FOULOIS. Never at any time, other than the preliminary work that was involved before the passage of the July 24 bill, and from that time on I devoted my time, between that date and the time I left for France, to the personnel side of it, to the training and organization of the men, getting that under way, and the recruiting of men.

Mr. LEA. And you devoted yourself to ascertaining what was needed, and the Bolling Commission did, too, did it not?

Maj. FOULOIS. Yes.

Mr. LEA. Do you find any fault with what this Government did, so far as its efforts were concerned in trying to procure information from the Allies and their cooperation?

Maj. FOULOIS. I think we did not go far enough in it. I have no fault to find with what we did do. I think we did everything possible. I think we ought to have insisted on utilizing every facility they had until we were ready to do our own work over here.

Mr. LEA. It was understood to begin with that they at that time were prepared for some quantity production along this line, was it not?

Maj. FOULOIS. In France?

Mr. LEA. Yes.

Maj. FOULOIS. We did not find it so afterwards.

Mr. LEA. They were not, as a matter of fact?

Maj. FOULOIS. No, sir.

Mr. LEA. Do you know about how many planes they had prior to entering the war?

Maj. FOULOIS. I do not. Roughly, I think they had four or five thousand of all types for training purposes and everything else.

Mr. LEA. How was England qualified for quantity production at that time?

Maj. FOULOIS. England was coming along very fast. I think at the time we came in France was falling off a little, but England was coming ahead, but that was due to the fact that she was camping on our raw material situation over here all the time and was keeping in very close touch with all the contracts. I know when we came in England only had approximately the same number of squadrons on the front that we had 18 months later. I know approximately what they had. We put on the front approximately in 18 months what it took England to do in two and a half years. Of course we had the advantage of their mistakes and profited by them.

Mr. LEA. Do you not accept that as to some extent qualifying or minimizing the statement that our program was a complete failure?

Maj. FOULOIS. In what way?

Mr. LEA. The fact that we, in less than 18 months, accomplished what England did in 3 years.

Maj. FOULOIS. I think a great many things were done in spite of the actual showing that was made on the front over there. For instance, if you take the program by and large, to be perfectly fair to the work that has been done, and with that estimate, it does not mean \$640,000,000 for airplanes and engines, the estimate for airplanes and engines being \$368,000,000. And then we had all the other assets to show for the \$640,000,000.

Mr. LEA. That, of course, is only a part of it, as to what we did with the \$640,000,000?

Maj. FOULOIS. I was wondering whether that was the point you were trying to bring out.

Mr. LEA. I understood you to say that you branded the program as a complete failure—that is, America's effort?

Maj. FOULOIS. If I did I wish to correct it.

Mr. LEA. Did America play an effective part in this war from an aviation standpoint—a material part?

Maj. FOULOIS. May I have that question again?

Mr. LEA. I say, did America play a material part in this war from an aviation standpoint—an effective part?

Maj. FOULOIS. If it had not been for America you would not have had any aviation over there—French, English, or Italian.

Mr. LEA. Why not?

Maj. FOULOIS. Due to the fact that we supplied them with raw materials, and the only thing that kept it alive—

Mr. LEA (interposing). That came out of this appropriation, did it not?

Maj. FOULOIS. No, sir; that was outside of the appropriation. I presume that was the interallied governmental contracts made over here.

Mr. LEA. For instance, take the spruce we handled. Did we not supply more to the Allies than we did to ourselves?

Maj. FOULOIS. A great deal of the spruce, I think, went to the Allies. In fact, I have on numerous occasions had to send cablegrams here to remind our people that the Allies had to be taken care of and not to divert too much to our own uses. Occasionally I would find out they were diverting it, and I should say the Allies were trying to get too much and we had to stop it to keep our own people going. That was one of the functions I had over there, in addition to the military work. I was chairman of the Joint Army

and Navy Committee that regulated the distribution of raw materials to all the Allies.

Mr. LEA. Is it not a fair proposition that your own experience and the experience of the Allies in the war, as well as that of America, justified the conclusion that there were great difficulties in developing and producing satisfactory airplanes and engines and meeting the new experiences as they developed?

Maj. FOULOIS. Some of the biggest difficulties that I think any country has ever been up against in connection with the development of aviation.

Mr. LEA. You had every difficulty that existed with reference to every other line of the service, and also the additional difficulty due to the fact that this was a new thing that we were ignorant of?

Maj. FOULOIS. Trying to do something without the experience.

Mr. LEA. At the beginning of the war the machines were unequipped, were they not?

Maj. FOULOIS. Absolutely.

Mr. LEA. We did not have schedules for electrical appliances and various other appliances?

Maj. FOULOIS. We did not know what a fighting machine was.

Mr. LEA. Nor a lighting system, nor a system of lighting over areas, and a great many things of that kind.

Maj. FOULOIS. Exactly.

Mr. LEA. So that the effect of your testimony is not that you want to minimize the difficulties that stood in the way of accomplishing this program?

Maj. FOULOIS. Exactly not, and I am very glad if by that line of questioning I can bring out a great deal of that.

Mr. LEA. I think I misunderstood your position.

Maj. FOULOIS. That was not intended at all. I tried to bring out as closely as possible the salient features in connection with the questions asked. Now, to take the other side of the argument, in my opinion there is no country or no people that have ever had to sit down to a problem and try to solve it as we had to do in connection with aviation—no military problem or any other problem. We knew nothing about aviation at the outbreak of the war, and there was very little experience on the other side, when we come down to it. We had a great deal of difficulty in getting any information from the other side. I think that was partly due to the difficulty about letting our observers go over there. I think that was more or less of an official difficulty and that there were diplomatic reasons why we should not have people over there. I do not know what they were, but that precluded us from getting in touch with what was going on abroad. We had no engineers in this country other than a few men who had been working for six or eight years, and a very small industry. We knew nothing ourselves except what we had learned over here in handling inferior types of machines. We did not have any conception of the different features in a fighting machine and a flying machine, and we did not appreciate the fact that we had to have innumerable instruments of every description, which did not mean anything to the ordinary plane we used here in the United States. We were up against all of those things, and that, undoubtedly, in my opinion, taking the matter as a whole, had a good deal

of an effect on the production of airplanes and engines in the United States.

Mr. LEA. So that when you made this original estimate it was within the hope rather than within the confidence that you would be able to accomplish it in that period?

Maj. FOULOIS. I had very high hopes and also had a good deal of confidence that if our people had followed the thing out—that is, taking the sample machines that we sent the commission to France for, and which were brought back to the United States—that if they had been put into production, and if necessary, Chinese copies been made, we could have produced those machines and provided increased production and brought up our service and not required us to buy everything that we had to buy as fast as possible, and then follow behind with the experimental types, better than the types then in use. That was the original policy, and I fully anticipated in doing that that it would take time to put the sample planes into any institution in the United States, any manufacturing industry. That means time, because on the other side they are all made under the metric system, and you have got to change the whole system of measurements, and I fully expected a lot of those things to be done, and it would take time to have them done.

Mr. LEA. How much time would you think?

Maj. FOULOIS. I figured at least if we took the planes—we had difficulty in getting them aboard the boats, in getting transportation for them, difficulty in getting them over here, and then there were difficulties when we got them here, blue prints missing and things of that kind, which meant a delay which was serious.

Mr. LEA. The production in America had to be carried on by inexperienced personnel and in a demoralized labor market that was insufficiently supplied in any mechanical line, beside the changes that were demonstrated to be necessary?

Maj. FOULOIS. I had this hope, that if it could be done at all it could be done by the automobile people, who probably had more nearly come in contact with conditions in regard to production developments, and had come more closely to aviation than any industry, and that was because they had to change models every year, and from an engine standpoint they were better informed than anybody else.

Mr. LEA. When you began the consideration of this question, did you have any consultation with any practical airplane men, such as Curtiss or the Wright people?

Maj. FOULOIS. To consider the estimates?

Mr. LEA. No; in regard to the question as to what should be done?

Maj. FOULOIS. My recollection is that we discussed it on a number of occasions. I have talked with Mr. Curtiss and with Orville Wright, although I have not seen Orville Wright so much in the last few years, but it was generally understood that what we were after was to give the finest thing in the world, and they all knew we had nothing but a training machine.

Mr. LEA. To what extent did this country avail itself of the advice and information of such men as Wright and Curtiss?

Maj. FOULOIS. That I can not say. I have known all those men personally since the history of aviation began, and would always

go to them when I thought I was up against a mechanical problem or a manufacturing problem, would always go to them personally. I do not know of any official use of their services during the war.

Mr. LEA. You do not know whether they were cooperating with the Government or not?

Maj. FOULOIS. Not to my knowledge, although I think Orville Wright was commissioned a major in the Reserve Corps, and I think he worked very closely with our work at Dayton, Ohio.

Mr. LEA. Going back to the question of what became of the \$640,000,000, how many engines were produced in the United States before the armistice?

Maj. FOULOIS. I am not sure. I have no figures on the production.

Mr. LEA. Could you get the figures?

Maj. FOULOIS. We can have them sent down.

Gen. MENOHER. I have some figures on the number of planes and engines shipped to points of embarkation and those that were floated, cleared from the dock to the other side.

Mr. LEA. The United States out of that appropriation acquired a large number of aviation fields, did it not?

Maj. FOULOIS. Acquired a large number?

Mr. LEA. Yes; either by lease or purchase.

Maj. FOULOIS. Yes, sir.

Mr. LEA. Do you know about what amount was expended on that, including the buildings?

Maj. FOULOIS. The actual amount?

Mr. LEA. Yes; or approximately?

Maj. FOULOIS. No, sir; I have no knowledge of that.

Mr. LEA. They were large sums, undoubtedly, were they not?

Maj. FOULOIS. Yes, sir.

Mr. LEA. Do you consider that a necessary and advisable expenditure, or not?

Maj. FOULOIS. In my opinion, I think the original outlay of the fields, as originally planned, was necessary.

Mr. LEA. The fields were necessary for training and mobilization purposes?

Maj. FOULOIS. Yes, sir.

Mr. LEA. Assuming we were justified in preparing for a war that would last through 1919, the only practical course was to provide on a large scale, was it not?

Maj. FOULOIS. Yes, sir. That was the original idea in the original estimate. That was figured on approximately a three years' war.

Mr. LEA. On a three years' war?

Maj. FOULOIS. Yes, sir.

Mr. LEA. Did your estimate contemplate this system of fields?

Maj. FOULOIS. Yes, sir; I think it is covered in that estimate.

Mr. LEA. Did it also include the spruce matter?

Maj. FOULOIS. No, sir; nothing as regards production, except to build what they would need in connection with spare parts. There is an item for spare parts for airplanes in that estimate.

Mr. LEA. Was there any production of airplane timber included in that estimate?

Maj. FOULOIS. No, sir; not as an individual item.

Mr. LEA. But that turned out to be a very material feature?

Maj. FOULOIS. So I understand; yes, sir.

Mr. LEA. Was that due to an oversight of that necessity, or how did you figure in providing for the timber, in making the estimate?

Maj. FOULOIS. We did not take that into consideration at all. I think we just simply estimated for our needs in finished material, and that had nothing to do with the raw materials.

Mr. LEA. You estimated in the terms of completed machines?

Maj. FOULOIS. Yes, sir; completed machines.

Mr. LEA. In the book on "United States Aircraft Production" the production is given as 32,420?

Maj. FOULOIS. American produced engines.

Mr. LEA. Did that include the Liberty engines and the Hispano-Suiza?

Maj. FOULOIS. Yes; I take that to be the total American production.

Mr. LEA. Perhaps I had better not bother you with that until we get those figures accurately.

Maj. FOULOIS. That report was made up by the experts who had direct charge of production of all engines, and the figures were furnished to the Secretary of War for incorporation in his book on munitions.

Mr. LEA. That number of machines was produced before November 11, which was five months later than you estimated on your program. What were the total amount of engines on that estimate—45,000, was it not?

Maj. FOULOIS. I believe so; yes, sir.

Gen. MENOHER. I think it was 45,200.

Mr. LEA. Now, as I understood your testimony, you felt that the failure to provide engines and airplanes was not due to the other side. Was not that in substance your statement?

Maj. FOULOIS. Yes, sir; I think so, as far as the responsibility of the Air Service organization lay on the other side.

Mr. LEA. To a certain degree, is not the other side responsible, in that so many changes were made in the machines ordered and revocations? I am not saying that in any censuring sense.

Maj. FOULOIS. Yes. In that respect may I be allowed to qualify my statement previously made?

Mr. LEA. You readily recognize the disarrangement that made in American factories which perhaps had gone to a good deal of work and expense to prepare particular machines and designs and had the designs revoked by orders from the other side?

Maj. FOULOIS. Yes; I recognize that.

Mr. LEA. What were the conditions over there that justified the changes and revocations?

Maj. FOULOIS. The conditions over there were, I think, more or less set forth in the cablegrams which the chairman read a short time ago in Judge Hughes's report, the probability of types being rated as second class or as obsolescent. That is the evolution of the subject. The condition they had to regulate their work on over there was what was going on at the front, and particularly during 1916 and 1917 the evolution of the fighting plane was very rapid. It kept improving all the time. When the Germans would bring out an improvement the English and French would meet it, and it made a very unstable production proposition. That condition existed up

to the summer of 1917. Very little change has been made. The planes of almost all types reached their maximum of evolution and of change, with very small details, at the time we were getting to know something about it, in the fall of 1917. There was very little change from that time on.

Mr. FREAR. What important change was made outside of the cancellation of the Spad contract, which was located in the revoking of orders?

Maj. FOULOIS. That is the only one I have any knowledge of particularly. I do not remember anything else particularly important. There is this condition that arose over there that should be understood, but it was about six of one and half a dozen of the other. Cablegrams used to come through to us about as thoroughly garbled as you could imagine, and they got them from us in the same way. It was a most unsatisfactory way of keeping in touch, and we finally got a courier system working, and that was infinitely better. There was always the possibility of misunderstanding, and I think it was equally bad on each side, as far as that condition was concerned.

Mr. LEA. Outside of that condition, it is in effect saying nothing against the production in America to say that you people over there were not responsible for it because you had nothing to do with it?

Maj. FOULOIS. Take the case of the cancellation of the Spad contract, somebody in France was responsible for that.

Mr. LEA. Outside of that you people were not responsible because you were not concerned in production. You were operating the machines at that time?

Maj. FOULOIS. Entirely so, except that we were concerned with production in connection with the needs of our allies and our own needs in our shops and depots.

Mr. LEA. That was practically incidental?

Maj. FOULOIS. Incidental, entirely.

Mr. LEA. Did what you say have any relation to criticism, so far as the American end of production was concerned? Were you familiar with the American end of production?

Maj. FOULOIS. No, sir; not after I left. From the time I left, in the latter part of October, until I returned, in the first part of July, I tried to follow it through newspapers and through the hearings which I had, but I know of nothing first hand, or by my own information.

Mr. LEA. By saying you were not responsible over there, did you mean to infer that they were responsible over here?

Maj. FOULOIS. If we were not responsible over there, the responsibility must be here, if there is any responsibility to be fixed.

Mr. LEA. Did you intend to pass judgment upon it?

Maj. FOULOIS. No, sir; I did not. I will accept responsibility for everything that occurred while I was Chief of the Air Service over there. I am willing to make that statement that during that period I do not consider the Air Service in France was responsible for any failures which may have been alleged to have taken place.

Mr. LEA. Any more than the change of conditions, which could not be avoided, unless there was a mistake in this Spad contract matter?

Maj. FOULOIS. Yes, but that occurred before my arrival in France.

Mr. LEA. In reference to the cancellation of the Spad order, is there any other information you can give us which throws any light upon that?

Maj. FOULOIS. Of course, it had a very important bearing on the whole situation. There is no question in my mind about that. But I do not think the responsibility, in so far as originating cablegrams is concerned, should be considered in view of the very much upset conditions over there in France at that time. We sent new men over there to find out about a lot of new things which they knew nothing about. They were groping in the dark when changes were being made. They thought the two-place fighter was going to be the big thing and that the one-place fighter would be washed out. But it is a difference of opinion. But that was a case where there was a difference of opinion among some of the highest authorities as to the relative merits of the one-place fighter and the two-place fighter, and they went on the assumption that the fighter of the Bristol type was going to be put through.

Mr. LEA. It was a mistake in judgment?

Maj. FOULOIS. It was a mistake in judgment backed up by everybody else over there. It was a question of what machine was going to be built. The two-place fighter fell down.

Mr. LEA. And the situation over there was such that that was the allied judgment at the time the cable was sent?

Maj. FOULOIS. I think it was the judgment of a certain portion of them.

Mr. LEA. You did not mean to infer that this cablegram canceling the Spad contract did not represent the American authorities over there? It was not a cablegram without authority; is that your view?

Maj. FOULOIS. I consider it was with authority, possibly, for them to act upon it. Here is the condition. I want to clear this up, because it is a matter that involves Col. Bolling's and my reputation.

The condition that existed at that time was this: Col. Bolling was sent with this commission. His general instructions were to look after matters relating to production of airplanes and engines and the securing of the foreign types and sending them home for production here. He really had authority to go ahead and handle all matters of that kind. He also had authority at that time to cable direct to the United States to the State Department through his brother-in-law, Mr. Phillips. He did that in the interest of expediency, in order to take the congestion off of some of the other cables, because the congestion was very heavy, and, in my opinion, it was a perfectly logical and proper thing to do. But those cablegrams, coming through the State Department, were not going through our American general headquarters. The Chief of the Air Service at that time, Gen. Kenly, was generally kept in touch with Gen. Pershing. These cablegrams were not going through general headquarters, but were going direct over the State Department cables. In one way that expedited things, but in another way it separated the coordination of the military and civil work over there and the industrial work.

Mr. FREAR. Let me follow that up. The question assumed that this was a cancellation of the Spad contract. As a matter of fact, it says here, and that is what Judge Hughes calls attention to, to continue the present contract to continue the 3,000, and he fixes the responsibility on this side?

Maj. FOULOIS. The record is not complete, I think, and I want to do justice to the men over there and to make the whole matter complete in regard to the responsibility that must exist in connection with the cancellation, partly on that side and partly here.

Mr. LEA. Is it your understanding of it that a part of the American representatives over there knew of and approved this cablegram while others were in ignorance of it?

Maj. FOULOIS. Yes; I think that was the condition due to the fact of this separate channel of communication through the State Department. A great many things went through there that had to do with production. Things that had to do with personnel went through general headquarters. There was a lack of unity of action until everything went through G. H. Q., and things began to be pooled together.

Mr. FREAR. The question in regard to that cablegram caused us some confusion. I am referring to the cablegram that said to continue production. This cablegram of November 8, 1917, said to continue production but cease making contracts for Spads. That is, the 3,000 Spads. What cablegram have you reference to?

Maj. FOULOIS. I think there are several cablegrams.

Mr. FREAR. This is the last cablegram to which Judge Hughes refers.

Maj. FOULOIS. That was one of the points I wanted to bring up, that certain specific cablegrams have only been referred to, where there are other cablegrams that had a bearing upon it.

Mr. FREAR. Subsequent to November 8?

Maj. FOULOIS. I believe so. There are some before that.

Mr. FREAR. You came in December, and you did not want to be held responsible for it?

Maj. FOULOIS. I became responsible on the 26th or 27th of November.

Mr. LEA. The cablegram referred to by Mr. Frear suggests that they stop the machines so far as not contracted for and started. Of course, we have not any evidence to show how many of them had been started. That is a condition in the factory which had not been disclosed.

Mr. FREAR. It says, "recommend you produce number already actually under contract and started." In other words, if you have contracted for them and have not started them, do not produce them. I think that is the construction.

Mr. LEA. The idea was if you have these machines on the way, let them go.

Maj. FOULOIS. That committee over there had a copy of the same estimate and a copy of all the work we had recommended to the Aircraft Production Board. I am rather inclined to think Mr. Frear's viewpoint was what they contemplated over there, that they knew we had contemplated putting into production a certain number of the Spads, anyway. I know Col. Bolling did, because he had copies of the same papers I have mentioned here.

Mr. LEA. Taking this cablegram as a man would read it, it says "contracted for and started." There was no use putting in the word "started" if they wanted them to produce what was contracted for.

Mr. FREAR. That would mean the necessity of going over every machine to determine whether it had been started. That was Judge Hughes's interpretation of it.

Maj. FOULOIS. If you go to the bottom and investigate all our cables you will find so much garbled language that you would wonder how anybody would understand them.

Mr. LEA. My idea was that that was a situation that calls for further information.

Maj. FOULOIS. I think that is a point that is most important, and is one of the things particularly brought up on every occasion before I left here, that we must depend upon our own production in the United States to supply our American troops over there.

Mr. FREAR. Judge Hughes follows it up with this statement, "But that was not done."

Maj. FOULOIS. We knew perfectly well from the military situation that neither France, England, or Italy were physically capable of taking care of the United States troops over there, and our policy should have been to produce for ourselves, and they were only to take care of us with all war material until we were in shape.

Mr. LEA. Were they able to furnish machines and engines at the time they agreed?

Maj. FOULOIS. No.

Mr. LEA. They neither furnished the machines in the time or in the amount agreed upon?

Maj. FOULOIS. No.

Mr. LEA. To what extent were we responsible for that by failure to deliver materials?

Maj. FOULOIS. I fought with the French for four or five months trying to determine what we ought to get, and to find out how much we were obligated to them to warrant their starting our machines to us. They continually argued that they had not the machines to turn over to us, that they needed them at the front, and they had to practically get an assurance of the delivery of the raw materials, so that they would never at any time have to delay the supplying of the needs of their own troops. Take the spring campaign of 1918. We were just getting under way, getting equipment for the Army, when the spring campaign came along, and they threw everything they had in. There was an intensive campaign for several months which wiped out a great amount of the reserve. They had to know where the stuff was coming from to keep up production before they could turn over anything to us.

Mr. LEA. From the time the drive started in March until the 18th of July conditions were so pressing that they practically had no option as to what they could do?

Maj. FOULOIS. There was no question in the latter part of March, and up to May, and it was only early in May that we had guaranteed to us the turning over of the necessary aeronautical material for every division.

Mr. LEA. Do you know how many engines they did turn over to us?

Maj. FOULOIS. I have not those figures right here. They are all in the records of the Air Service.

Mr. LEA. Going back to the question of furnishing material to the French and English, can you give us any light on why we failed to deliver all we agreed?

Maj. FOULOIS. The material that was mostly needed at the most critical time was what was commonly known as the J. G. White contract for approximately 15,000 tons of raw material. I think they were machine tools. That was a contract that was drawn up in connection with an original contract for airplanes and engines which Col. Bolling made with the French. I do not remember just the number of planes mentioned, that we were obligated for under that contract. I think it is referred to in Mr. Hughes's investigation. But we were obligated under that contract to furnish raw material at a certain date of a certain amount, and a schedule of raw material was furnished by the French of what was needed. That contract for raw materials was the one that had everything to do with our getting the planes from the French, originally.

Mr. LEA. Do you know anything about the White Co.?

Maj. FOULOIS. No, sir; they are a contracting company in the United States.

Mr. LEA. They were outside of aviation entirely?

Maj. FOULOIS. Outside of it entirely; yes, sir.

Mr. FREAR. I see that Mr. Fauber has made a statement in which he criticizes the members of the committee in regard to himself. For one I have never received any letter of any intimation from any person on any subject connected with the cross-license system except Fauber, with the exception of a letter from an aeroplane organization which takes the same view as he does.

Mr. LEA. As I understand it, Mr. Frear, you desire to go on with Mr. Fauber to-morrow morning?

Mr. FREAR. Yes. I desire to insert the following data in the record. (The data referred to was marked "Exhibit 106," and is as follows:)

EXHIBIT 106.

WAR DEPARTMENT,
OFFICE OF THE DIRECTOR OF AIR SERVICE,
Washington, July 25, 1919.

HON. JAMES A. FREAR,
Capitol,

DEAR MR. FREAR: I hand you herewith answer to No. 8 of your questionnaire of June 23, 1919.

This answer is complete, except a statement as to estimated value of planes now on hand.

It is apparent that at least three different bases might reasonably be used in the preparation of such an estimate, viz:

First. Based on original cost.

Second. Based on present value to the Air Service.

Third. Based on present marked value.

If you will suggest which of these bases you prefer, or some other basis of computation that will give the information you desire, this estimate will be prepared and furnished you.

You will find herewith information regarding the sale to the Curtiss Aeroplane & Motor Corporation and circular letters offering for sale unserviceable airplane motors and airplanes to colleges and schools.

Very respectfully,

DAVID S. SEATON,
Captain, Air Service, Military Aeronautics, Liaison Officer.

WAR DEPARTMENT,
OFFICE OF THE DIRECTOR OF AIR SERVICE,
Washington.

From: The Director of Air Service.

Subject: Unserviceable airplane motors and airplanes.

1. The Air Service has an accumulation of miscellaneous airplane motors and unserviceable airplanes as per attached list, which were used for instruction purposes at the various training camps and schools. It has been decided to offer these motors and airplanes to all colleges and schools desiring to teach aeronautical engineering, and prices have been fixed commensurate with their value for this purpose.

2. (a) These motors are unserviceable for flying, but can be used for instruction purposes.

(b) The movable parts are all present.

(c) The airplanes are without motors, but the controls are in position so that the action of the control surfaces can be demonstrated.

(d) This offer does not include instruments nor propeller.

3. If your institution is interested in the purchase of any of these motors or airplanes without motors, it is requested that you advise the Director of Air Service (attention Materials Disposal and Salvage Division) at your earliest convenience.

4. These planes and motors are located at various storage depots in the United States, and upon receipt of order shipment will be made from nearest location to the college or institution ordering shipment. All prices are quoted f. o. b. location, and certified check, payable to the Treasurer of the United States, must accompany the order in each and every case.

By authority of the Director of Air Service.

W. E. GILLMORE,
Colonel, Air Service, Aeronautics, Chief Supply Division.

By W. C. MCCHORD,
Lieutenant Colonel, Air Service, Chief Materials Disposal and Salvage Division.

Aeronautical engines.

Hispano-Suiza (A).....	\$250
Liberty 12.....	250
Le Rhone 80 horsepower.....	175
Gnome.....	100
Hall-Scott A-5-A.....	150
Hall-Scott A-7-A.....	100
Hall-Scott A-7.....	100
Renault.....	100
Clerget.....	100
Lawrence.....	75
Mercedes.....	150
Thomas Morse 8.....	150
Sturtevant 5-A.....	200
Sturtevant S-4.....	200
Unserviceable airplanes without motors or instruments.....	250

Types: Glenn Martin R, Standard J-1, L. W. F., De Haviland, Thomas Morse Scout.

Question No. 8. (a) Statement of all expenditures and all contract obligations for aircraft, field, factories, and other charges made or to be made against aircraft appropriations up to June 30, 1917, June 30, 1918, and November 11, 1918.

(b) Total planes now on hand.

(c) Estimated value.

(d) If any have been sold, give list of same, cost, selling price, and name of purchaser.

Answer. (a) Statement attached, marked (a).

(b) Total planes on hand. Planes on hand at fields and depots, all types United States, 9,031. (From inventory plane and engine branch as of June 30.) Planes, A. E. F., 1,468. (From Progress Report, p. 141, May 21, 1919.)

(c) Estimated value. (See letter of transmittal.)

(d) If any have been sold, give list of same, cost, selling price, and name of purchaser.

Planes and engines sold by the United States Government.

Name.	Number.	Cost, each.	Selling price, each.	Purchaser.
L. W. F. (Sturtevant engine).	25	\$12,760	\$12,760	Czecho-Slovak National Council, Siberia, Asia.
Standard J-1.....	1	5,790	1,000	Grand Waldref, Minneapolis, Minn.
Do.....	1	5,790	1,000	W. F. Bullock, Minneapolis, Minn.
Do.....	1	5,790	1,000	E. G. Schorning, Minneapolis, Minn.
Do.....	1	5,790	1,000	L. C. Donaldson, Minneapolis, Minn.
Do.....	1	5,790	1,000	W. P. Larrabee, Minneapolis, Minn.
Curtiss JN-4.....	1,616	6,464,000	12,720,000	Curtiss Aeroplane Motor Corporation, 52 Vanderbilt Avenue, New York City.
Standard J-1.....	1,100	4,675,000		
Curtiss Type OX-5 engines.	4,608	9,676,800		
Liberty 12 (defective)...	1	5,000	250	University of Minnesota, Austin, Minn.
Liberty 12 (defective)...	1	5,000	250	Rensselaer Polytechnic Institute, Troy, N. Y.
Liberty 12 (new).....	2	5,000	2,500	Lawson Airline Transportation Co., Milwaukee, Wis.

¹ Total amount.

(Thereupon the subcommittee adjourned to meet tomorrow, Thursday, April 7, 1919, at 10 o'clock, a. m.)

SUBCOMMITTEE No. 1 (AVIATION)
OF THE SELECT COMMITTEE ON
EXPENDITURES IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Thursday, August 7, 1919.

The committee met at 10 o'clock, a. m., pursuant to adjournment on yesterday, Hon. Clarence F. Lea, presiding.

TESTIMONY OF MR. W. H. FAUBER, ENGINEER AND MANUFACTURER, NO. 55 HICKS STREET, BROOKLYN, N. Y.

(The witness was duly sworn by Mr. Lea.)

Mr. LEA. Give your name to the reporter, please.

Mr. FAUBER. My name is W. H. Fauber, or if you want my full name it is William Harrison Fauber.

Mr. LEA. Where do you reside?

Mr. FAUBER. 55 Hicks Street, Brooklyn, N. Y.

Mr. LEA. How long has that been your residence?

Mr. FAUBER. About a year and a half or two years. I have resided in that locality for about four or five years, in that locality.

Mr. LEA. Where did you reside before that?

Mr. FAUBER. I was in France five years, from 1905 to 1911.

Mr. LEA. Where were you born?

Mr. FAUBER. In Indiana.

Mr. LEA. What is your occupation or profession?

Mr. FAUBER. I was born a farmer's boy, and up to the time I was 21 years of age I was a farmer for the most of the time. I went to Hamilton, Ohio, at the age of 17 and learned the machinist's trade, but returned to the farm for a year or two, and then went to Chicago and engaged in the manufacturing business, in a small way—

Mr. LEA (interposing). What kind of manufacturing?

Mr. FAUBER. I was manufacturing doorbell specialities on some patents of mine.

Mr. LEA. An electric doorbell?

Mr. FAUBER. No; mechanical doorbells. Then I brought out an invention of a one-piece bicycle crank hanger, known as the Fauber crank hanger, which to-day is very largely in use.

Mr. LEA. When was that?

Mr. FAUBER. The patent was obtained in 1893, but the business began in 1896 in Chicago.

Mr. LEA. Was that manufactured by your own establishment?

Mr. FAUBER. By my own establishment, by myself.

Mr. LEA. You still hold the patents on that, do you?

Mr. FAUBER. No; the patents have expired. I sold the business out in 1905 just before I went abroad.

Mr. LEA. Your time was devoted to that work until 1905?

Mr. FAUBER. Well, I built up quite a large business. I employed 400 men, at times; that is, in the business season. And aside from this product—which ran into annual sales of 200,000 a year, or, in other words, half of the bicycle producers in the United States were buying this article—I also manufactured some hardware specialties. I should state, however, that in 1900 my lease on the building, which I occupied in Chicago, expired, and I moved to Alton, Ill., and there formed a company which was known as the Fauber Manufacturing Co. There we still carried on this line. I went into the automobile business then, doing work for people like the Peerless. I also took contracts in 1903 and 1904 for automobiles, though not a very large number of them. In addition to that we manufactured hardware specialties, so that we were operating quite an establishment.

Mr. LEA. Any particular kind of automobiles, or was your work principally the manufacture of particular parts of automobiles?

Mr. FAUBER. As I stated, I manufactured parts, principally for the Peerless Co. at that time. And that included, I might say, practically all of their parts at that time. You see at that time they were not building many machines, automobile concerns were not, in 1903. That year I built over 157 sets of complete parts, like rear axles, front axles, steering gear, carburetors, and all that sort of thing, which they assembled. Then I took a contract for 100 complete automobiles, for which I made all the parts.

Mr. LEA. For what company?

Mr. FAUBER. That was called the Marr car. It was financed by a man named Brown, who was a tobacco and cigar man in Detroit, and had gone into the business because he heard that the Cadillac people and some others, the early builders, were making fabulous sums of money, and he was going to get a share of it.

Mr. LEA. Was that the only place his machines were manufactured?

Mr. FAUBER. Yes, sir; that was the only place. That was his first order, and when we finished the contract in 1904 I developed a machine, and went into the manufacture of automobiles myself. But my company did not have enough money to safely finance the automobile business in connection with the business that we had at that time—and, furthermore, it was very generally believed among financiers and others that the automobile industry was going to go to pieces just as the bicycle industry had. Also, at that time, Mr. Edison came out with a statement that he was going to produce a storage battery which would take the place of the explosive engine, of the gasoline engine, and that was very generally believed, and had the effect of preventing many people from investing money in the automobile industry.

Mr. LEA. So that the manufacture of automobiles was stopped by you, and this man stopped the manufacture of his automobile also. Is that a fact?

Mr. FAUBER. Yes, sir; he quit the business. The man who got up the Marr car went to the Buick and started the Buick Co. The Marr car was a very good little machine, I might say.

Mr. LEA. If you will briefly tell us what your work was over in France, what you went over there for, I will thank you.

Mr. FAUBER. I have always been interested since I was a boy in aeronautics. I think I can go back as far as Dr. Christmas did, perhaps.

Mr. LEA. Twenty-seven years?

Mr. FAUBER. Yes, sir; and further than that. Because I read books on spherical ballooning when I was a boy on the farm. I was designing and trying to invent airplanes and making drawings of airplanes at that time, so that I followed the study very closely.

Mr. LEA. You had in mind heavier-than-air machines at that time, did you?

Mr. FAUBER. Oh, yes; I have always been a believer in the heavier-than-air machine. Before leaving Chicago I carried out some minor experiments, although they were of a trifling nature.

But I might explain that I went to France to sell the European patents in this bicycle industry. After disposing of them I went to Paris. I happened one day to attend the balloon races, as we would call it here, and I saw that the French people were very much interested in aeronautics. While there I met an American, Mr. Lahm, the father of Lieut. Lahm, who is well known in the American Army in aviation circles. I became a member, through his suggestion, of the Aero Club of France. I immediately began work investigating and studying and making experiments with aerial apparatus. In 1907 I built a place at Nautarre, just outside of Paris. I put up the buildings, renting the ground from the gas company at that place, and having put up the buildings I fully equipped them with machinery for carrying on my experimental work. I also was taking up the subject of hydroplanes, which has to do with aeronautics; also the hydro-aeroplane, and I developed the hydroplane and commercialized it. I designed the Maple Leaf, which returned the Harmsworth trophy to England. [Indicating on book.]

Mr. LEA. That is of a boat?

Mr. FAUBER. Yes; but it is exactly the same invention as used in their NC and all Government aircraft at the present time. Mr. Curtiss got the idea from me in France at the time when he came to the Reims meeting.

Mr. LEA. Just what is the idea of that invention?

Mr. FAUBER. The basic idea is the V-shaped hydroplane. It is this shape in cross section [indicating].

Mr. LEA. That is the shape of the bottom?

Mr. FAUBER. Yes; here you have it in this book [indicating photograph in book].

Mr. LEA. You stayed in France until what year?

Mr. FAUBER. I returned in December, 1910.

Mr. LEA. While you were there you were engaged in planning and designing mechanical contrivances, some of which related particularly to the airplane industry?

Mr. FAUBER. I remained in France because France was the foremost country in aeronautics. I attended, every month, the aeronautical dinners and attended all the meets, and followed closely all the aerial history, or early aviation history.

Mr. LEA. Was your enterprise there self-supporting?

Mr. FAUBER. Not at all. In those years I spent nearly \$100,000 money I had made.

Mr. LEA. You had to finance your own efforts?

Mr. FAUBER. Yes, sir.

Mr. LEA. After you returned to America, in what work did you engage?

Mr. FAUBER. I tackled a very great many people, sportsmen, to design hydroplane boats, and so on. Prior to my return to America I designed the *Pioneer*, for the Duke of Westminster, that came over and raced at Larchmont, and showed great speed. My name was published in the papers, and I engaged in designing boats—four or five boats the first year, the most of which were failures, because of trouble in getting engines which would run.

Mr. LEA. Light boats?

Mr. FAUBER. Not necessarily.

Mr. LEA. What kind of boats?

Mr. FAUBER. High-powered boats—speed boats.

Mr. LEA. Have you had any factory work since your return to America?

Mr. FAUBER. How is that?

Mr. LEA. Have you had any factory of your own, I mean, since you returned to America?

Mr. FAUBER. I have not.

Mr. LEA. Have you secured any patents relating to the airplane industry since you returned to America?

Mr. FAUBER. I have not.

Mr. LEA. Are you at the present time the owner of any patents concerning airplanes or airplane engines?

Mr. FAUBER. Yes; relating to airplanes.

Mr. LEA. What particular features of airplanes—I mean, in a general way?

Mr. FAUBER. They cover the basic plan of the V-bottom hydroplane hull, which is used to-day in all Government water aircraft.

Mr. LEA. Did you transfer your right, or any interest in your right, in that patent to anybody else?

Mr. FAUBER. I did not.

Mr. LEA. In what way did the Government acquire the right to use your patent?

Mr. FAUBER. The Government did not acquire the right; it just simply appropriated it.

Mr. LEA. You received nothing for your patent right?

Mr. FAUBER. No consideration; no, sir.

Mr. LEA. Is there any legal question involved as to your right in that matter?

Mr. FAUBER. Absolutely none.

Mr. LEA. I mean, as to the legal right of the Government to use your patent. Is that in question?

Mr. FAUBER. The Government I believe—of course I wouldn't stop the Government from trying to use my patent during the war, and the Government had a right, I believe, to use it then; but the only recourse they gave me was to go into the Court of Claims. I was not recognized as the Curtiss and the Wright people were recognized. The Curtiss patents were recognized as fundamental in hydro-aircraft.

Mr. LEA. There is the matter, then, as to whether you are legally entitled to compensation?

Mr. FAUBER. The same as the Curtiss people were entitled or the Wright people were entitled. They had no more rights than I had.

Mr. LEA. You are legally entitled to compensation for your patent rights when you present your claim to the Government for the use of them?

Mr. FAUBER. Most certainly. I not only was the pioneer in the art, but I spent about \$100,000 and several years time in the matter, and that constitutes a very good ground for claim.

Mr. LEA. Have you up to the present time presented a claim to the Government for the use of your patent?

Mr. FAUBER. Not in the form of dollars and cents, but I have repeatedly written to the various departments.

Mr. LEA. I presume it is your intention to present a claim to the Government?

Mr. FAUBER. Absolutely.

Mr. LEA. But so far the Government has not indicated whether it will contest your claim or not; is that a fact?

Mr. FAUBER. Well, the National Advisory Committee and the Secretary of War and the Secretary of the Navy have refused to give me any consideration. They have told me to go to the Court of Claims.

Mr. LEA. Well, I presume legally that is the place to go, isn't it?

Mr. FAUBER. I presume it is.

Mr. LEA. So that as far as that feature of the matter is concerned you have not exhausted your resources in the matter?

Mr. FAUBER. Oh, no; I have not.

Mr. LEA. I understand you have taken a particular interest in the last two or three years in the question of the cross-license system; that is a fact, isn't it?

Mr. FAUBER. You say in the last two or three years; the cross-license is dated July 24, 1917.

Mr. LEA. Since that time you have been deeply interested in that question, haven't you?

Mr. FAUBER. I first took an active part or interest in the cross-license agreement when I came down here to Washington—

Mr. LEA (interposing). I only want a general answer at the present time. I asked you if you had been deeply interested in the cross-license system in the last two or three years, or since it came up?

Mr. FAUBER. Yes.

Mr. LEA. I wish here inserted in the record an excerpt from the act of March 4, 1917, making an appropriation of \$1,000,000 to enable the Secretary of War and the Secretary of the Navy to secure basic patents, or patents as they may consider necessary, for the manufacture and development of aircraft in the United States, found at the top of page 6735 of the Congressional Record of May 9, 1918.

[Act of Mar. 4, 1917.]

To enable the Secretary of War and the Secretary of the Navy to secure by purchase, condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States and its dependencies for governmental and civil purposes, under such regulations as the Secretary of War and the Secretary of the Navy may prescribe, \$1,000,000.

Mr. LEA. I further want inserted in the record the cross-license agreement found at page 6739 of the same Congressional Record.

CROSS-LICENSE AGREEMENT.

This agreement, made this 24th day of July, 1917, between the Manufacturers' Aircraft Association (Inc.), a New York corporation (hereinafter called the "company"), party of the first part, and each person, firm, or corporation (hereinafter called the "subscriber" or "subscribers") as shall become stockholders of the said

company in the manner and under the conditions provided in the by-laws thereof (which for the purpose of this agreement are made a part hereof), and become parties to this agreement, parties of the second part:

Whereas the parties hereto are interested in the manufacture, sale, and use of airplanes, as hereinafter defined, and desire to promote and develop the industry in which they are engaged, and to encourage and advance the art applicable thereto; and

Whereas the said development and advancement in the past have not been capable of as complete accomplishment as is desirable, because of the existence of certain United States patents claimed to be basic in their nature, upon which suits have been brought, or threatened, for alleged infringement and for the collection of royalties and damages in connection therewith; and

Whereas it is desired to prevent and avoid such litigations or threatened litigations in the future and to give to all of the subscribers the right to manufacture, sell, and use airplanes embodying the inventions of each of the subscribers and to that end it is desired that licenses be granted as herein expressed: Now, this agreement witnesseth:

That for and in consideration of the premises, the covenants and conditions herein contained, and for other good and valuable considerations moving between the company and each of the subscribers hereto, and between the subscribers themselves, it is covenanted and agreed as follows:

I. DEFINITIONS.

The word "airplane," as used in this agreement, shall be understood to mean any form of heavier-than-air craft using wing surfaces for sustaining it, and to include propelling means, propellers, propeller hubs, radiators, and all parts and accessories used or useful in the airplane, except the engine and its accessories.

The words "airplane patent," as used in this agreement, shall be understood to mean any patent covering inventions for or capable of use in or in connection with airplanes, including propellers, propeller hubs, radiators, and all parts of airplanes and accessories used or useful in the airplane, except the engine and its accessories.

II. LICENSES AND POWERS GRANTED.

The "subscribers" grant, agree to grant, and cause to be granted to each other, licenses to make, use, and sell airplanes, under all airplane patents of the United States now or hereafter owned or controlled by them or any of them, or by any firm, corporation, or association owned or controlled by them, or under which they, or any of them, or any such firm, corporation, or association, have or shall have the right to grant licenses, in and throughout the United States, its territories and dependencies, for use therein or abroad, except that no rights, express or implied, are hereby granted under any foreign patents, nor shall said rights or the licenses, herein provided for, apply to or include the use of said patents in their application to other than airplanes, and except, further, that no licenses are hereby granted under the Dunne patents No. 975403, issued November 15, 1910, and No. 1003721, issued September 19, 1911, rights under which are held by the Burgess Co.

All licenses provided for herein shall run to the full end of the term of the letters patent under which the license is or is to be granted, and shall be personal, indivisible, nonassignable, and irrevocable, except for the causes and in the manner hereinafter stated.

The "subscribers" hereby designate, constitute, and appoint the "company" (and the "company" hereby accepts the appointment) as their true, sufficient, and lawful agent and attorney in fact, for them and in their respective names, to make and execute licenses in writing in the form hereto annexed and to deliver the same to those of the "subscribers" who at the time are stockholders of the "company" not in default hereunder and who shall have executed an agreement in writing of like tenor to this, and to enforce said licenses and any and all other obligations (including the obligation to make payments) of the "subscribers" under this agreement; and the "subscribers" hereby give and grant unto said "company" as full, complete, and ample power and authority in the premises as the "subscribers" themselves now have and possess.

All licenses provided for herein, when made, executed, and delivered in accordance with the provisions hereof, shall have the same force and effect as if they had been executed and delivered by the "subscribers" themselves.

III. COVENANTS OF FURTHER ASSURANCE.

(a) Each "subscriber" now or hereafter, having rights under any United States airplane patent or invention of such character that it has legal right and power to procure the grant of rights thereunder to others, but is not itself empowered to grant such rights, covenants to procure the execution of such further instrument as may be necessary to empower the "company" to grant rights under such patent or with reference to such invention to the extent and in the manner herein provided.

(b) Each "subscriber" covenants that it will not contract for or obtain any rights under any such patent or invention in such manner that its owner would be prevented from granting to other "subscribers" hereto similar rights on the same terms, unless the "subscriber" obtains at the same time the further privilege to grant rights under said patent or said invention, whereby the same may and will be brought under the operation of the instrument.

IV. COVENANTS AGAINST OTHER LICENSES.

Each "subscriber" covenants that it has not heretofore entered and will not hereafter enter into any contract or arrangement whereby its privileges under United States airplane patents, issued or to be issued, inventions, and rights owned or controlled by it have been or shall be diminished or surrendered so as to exclude or restrict the operation of this instrument in respect thereto. Each "subscriber" further covenants that it will not grant licenses under any such patents for use in airplanes with reference to which it is receiving royalties hereunder to any other person, firm, or corporation on more favorable or lower terms of royalty than those herein provided or which may become more favorable or lower during the term of such license.

V. AFTER ACQUIRED PATENTS.

When a "subscriber" shall hereafter acquire a United States airplane patent, or any right thereunder, he shall be entitled to compensation for the use thereof if the patent or patent rights covers an invention which secures the performance of a function not before known to the art or constitutes an adaptation for the first time to commercial use of an invention known to the industry to be desirable of use but not used because of lack of adaptation, or is otherwise of striking character or constitutes a radical departure from previous practice, or if either the price paid therefor or the amount expended in developing the same is such as to justify such compensation, provided that at the time said patent or patent right is reported to the "company" as required in subdivision (b) of paragraph VII, the "subscriber" claims such compensation and states the grounds on which such claim is based. Such report and claim shall be submitted to a board of arbitration to be selected in the manner provided for in paragraph XIII hereof, which board shall determine whether such compensation shall be paid, and if so, the total amount thereof and the rate of royalty or other payments which shall be paid (toward such compensation) by any "subscriber" desiring and taking a license under said patent, and shall also fix the time or times when said royalties or other amounts shall be paid.

VI. SPECIAL MODELS.

If any "subscriber" shall have developed the design and manufacture of any special model of airplane or airplane engine or other device used in an airplane (except the airplanes manufactured by the Burgess Co. under the Dunne patents hereinbefore mentioned and the Hispano-Suiza aeronautical engine, manufactured by the Wright-Martin Aircraft Corporation or its subsidiaries), which the United States Government may at any time desire to have manufactured in the factory of any other "subscriber" or in the factory of any manufacturer not a "subscriber" hereto, the said "subscriber" agrees that it will furnish to the other "subscriber" or said other manufacturer such complete specifications, drawings, and other production data as may be required for use in the manufacture of such special model, provided that and upon condition that the "subscriber" or other manufacturer in whose factory the work is placed by the United States Government shall agree with said Government and with the "subscriber" owning said specifications, etc., to pay and shall pay into the treasury of the "company" 1 per cent upon the contract price paid by the Government for each airplane or airplane engine or other device manufactured for it in accordance with said specifications, etc.

If the manufacture of such special model is conducted by one not a "subscriber," such manufacturer shall also agree to pay into the treasury of the "company" such

royalty as a "subscriber" would have been obliged to pay had it made and sold the airplane, engine, or other device, including the amount specified in subdivisions (a) and (b) of Paragraph VIII hereof, if an airplane, with or without engine, is the thing manufactured for and sold to the Government.

VII. REPORTS TO THE "COMPANY."

The following reports, in writing, shall be rendered to the "company" by each "subscriber" at the time or times hereinafter set forth:

(a) At the time of the execution of this agreement each "subscriber" shall report all United States airplane patents and inventions, together with serial numbers and filing dates of all pending applications for such patents, and all rights under such patents and inventions then owned or controlled by it, but no omission from such report shall exclude the patent, application, or right so omitted from the operation of this agreement.

(b) Within 30 days after the acquisition by any "subscriber" of any United States patent (other than patents to be issued upon inventions now owned by it) or right within the scope of this agreement each such "subscriber" shall report such acquisition, together with all the facts known to it as to such patent or right and its manner of acquisition. If such "subscriber" claims that additional compensation should be paid to it for licenses under such patent or right, it shall so claim in its report.

(c) On the 10th day of January, April, July, and October in each year each "subscriber" shall report the number of airplanes (with or without engine) sold and delivered by it, together with the names of the purchasers and the dates of delivery, or put into use for other than experimental or development purposes, or shipped out of the United States, during the three preceding calendar months.

(d) On the 10th day of January, April, July, and October in each year each "subscriber" shall report the number of airplanes, airplane engines, or other devices for use in airplanes which it has sold and delivered during the preceding three calendar months made from specifications, drawings, and other production data obtained from any other "subscriber," as provided in Paragraph VI hereof, together with the sales price and the dates of delivery; and there shall be included in the same report a copy of any agreement which the "subscriber" shall have made with another manufacturer as provided in said paragraph.

(e) Each license to other than "subscribers," as provided in Paragraph IV hereof, shall be reported within 30 days after its delivery.

The first of each of the reports specified in subdivisions (c) and (d) hereof shall be made by each "subscriber" on the 10th day of January, April, July, or October first occurring after it has become a "subscriber" hereto, and shall cover the period from July 1, 1917, to the first day of the month in which the report is due.

Each of the "subscribers" hereto shall keep separate books of account showing all business done under or subject to the operation of this agreement. The "company" may at any time have a New York certified public accountant, to be designated by it, audit such books of account of the "subscribers," together with such other accounts as the accountant may deem necessary, in order to verify or correct the reports herein provided for, and the "company" shall have such audit made when any "subscriber" so demands. Such audit, however, shall be limited to ascertaining whether the reports herein provided for are properly made and to correcting the same, if necessity for correction shall appear. No information obtained from any such audit shall be reported by the accountant or given to any of the parties hereto except as it directly applies to the reports required by this agreement.

VIII. PAYMENTS TO THE "COMPANY."

Each "subscriber" agrees to pay into the treasury of the "company" on the 10th days of January, April, July, and October in each year the following sums of money, to wit:

(a) On each airplane, with or without engine, required to be reported as provided in subdivision (c) of Paragraph VII hereof, the sum of \$200 until such time as the Wright-Martin Aircraft Corporation and the Curtiss Aeroplane & Motor Corporation shall have been paid the aggregate sums provided for in subdivisions (a) and (b) of Paragraph IX hereof.

(b) On each airplane, with or without engine, required to be reported as provided for in subdivision (c) of Paragraph VII hereof, such sum, not to exceed \$25, as the board of directors of the "company" may from time to time fix and determine as payable after the above-mentioned aggregate sums shall have been paid to the Wright-Martin Aircraft Corporation and the Curtiss Aeroplane & Motor Corporation.

(c) Such amount or amounts as the board of arbitration may specify as special compensation for after-acquired patents as provided in Paragraph V hereof, and required to be reported in subdivision (c) of Paragraph VII.

(d) Such amount or amounts as may be payable with reference to the use of specifications, drawings, and data as provided in Paragraph VI hereof, including the royalty payments therein provided for, but all 1 per cent payments on account of the use of such specifications, drawings, and data covering any one model shall cease when the total paid by all users shall aggregate \$50,000.

(e) All royalties received under licenses referred to in subdivision (e) of Paragraph VII.

Each "subscriber" who shall become a party hereto after the 1st day of July, 1917, shall on the 10th days of January, April, July, or October next occurring pay to the "company" those amounts which it would have been obliged to pay in accordance with the foregoing if it had been a "subscriber" on July 1, 1917.

Moneys paid into the treasury of the "company" pursuant to any provisions hereof shall not be or constitute or be deemed to be or constitute the assets, property, or profits of said "company," but shall be received and disbursed by it as the agent and attorney in fact of the "subscribers" in the manner and for the purposes herein mentioned.

IX. PAYMENTS BY THE "COMPANY."

Out of the moneys paid into the treasury of the "company" pursuant to the provisions hereof the following payments shall be made by the "company" on the 20th days of January, April, July, and October in each year, to wit:

(a) To the Wright-Martin Aircraft Corporation \$135 on each airplane, with or without engine, with reference to which payments shall have been made in accordance with subdivisions (a) and (e) of Paragraph VIII hereof, during the preceding three calendar months, until United States patent No. 821393, issued May 22, 1906, shall have expired, or until the aggregate sum of \$2,000,000 shall have been paid to the said Wright-Martin Airplane Corporation, when all payments to it hereunder shall cease, except as hereinafter provided.

(b) To the Curtiss Aeroplane & Motor Corporation \$40 on each airplane, with or without engine, with reference to which payments shall have been made in accordance with subdivisions (a) and (e) of Paragraph VIII hereof, during the preceding three calendar months until such time as the Wright-Martin Aircraft Corporation shall have been paid in full as provided for in subdivision (a) of this paragraph, after which there shall be paid to the Curtiss Aeroplane & Motor Corporation at the times herein mentioned the sum of \$175 on each of said airplanes until the aggregate sum of \$2,000,000 shall have been paid to it or until United States patent No. 1203550, issued October 31, 1916, shall have expired, when all payments to it hereunder shall cease, except as hereinafter provided.

(c) To each of the "subscribers" entitled thereto, such amounts as may have been paid to the "company" with relation to the use of after-acquired patents in accordance with subdivisions (c) and (e) of Paragraph VIII hereof.

(d) To each of the "subscribers" entitled thereto such amounts as may have been paid to the "company" on account of the use of specifications, drawings, and data, as provided in Paragraph VI and in subdivision (d) of Paragraph VIII hereof, but any royalty payment received from outside manufacturers shall be distributed as though received from "subscribers."

(e) To any "subscriber" who shall have granted licenses to others than "subscribers," as provided in Paragraph IV, the royalties received under such licenses which are not required for payments provided for in subdivisions (a), (b), and (c) of this paragraph.

Out of the balance of said moneys paid into the treasury of the "company" under this agreement, the "company" may retain and use sufficient to cover its operating expenses and to create such fund as, in the judgment of the board of directors of said "company," shall be necessary and proper for the further development of the airplane art and industry and the purchase of patents and rights for the benefit of the "subscribers" hereto.

If, after making the payments and reservation herein provided for, any surplus or balance remains out of the funds so paid into the treasury of the "company," the same shall be distributed by the "company" from time to time among those "subscribers" who have contributed to said moneys in proportion to their respective contributions under subdivisions (a) and (b) of Paragraph VIII other than those required for payments under subdivisions (a) and (b) of this Paragraph IX.

X. BREACH OF AGREEMENT.

In the event that any "subscriber" is claimed by the "company" or any other "subscriber," to be in default in the performance of any of its obligations hereunder, and such claimed default continues after 30 days' notice in writing, by the "company" or any "subscriber" hereto, to the "subscriber" claimed to be in default, then the board of arbitration, hereinafter provided for, shall determine whether there has been such specified default; and if such default is found to exist, shall fix the time within which it must be repaired, and shall assess such damages and impose upon the "subscriber" in default such other requirements (including the forfeiture of its stock and license) as may seem to the said board of arbitration to be proper under the circumstances. Each "subscriber" covenants and agrees that it will pay such damages and comply with such requirements as may be specified by the said board of arbitration.

Nothing contained in this paragraph shall deprive the "company" of the power to make, execute, and deliver licenses under the patents or patent rights owned and controlled by any defaulting "subscriber" or to which the "subscriber" may be entitled at the time he ceases to be a stockholder or "subscriber," nor deprive other than defaulting "subscribers" of any right which they may have received to the use of the said patents or patent rights.

XI. WITHDRAWAL FROM AGREEMENT.

Any "subscriber" may withdraw from this agreement at any time after 10 years from the date hereof on giving to the "company" written notice of its election so to do and on fulfilling all of its obligations up to the date of such withdrawal. But no withdrawal shall relieve the other parties and other "subscribers" from their obligations to each other hereunder, nor deprive them of their rights acquired under the patents and patent rights owned or controlled by the withdrawing "subscriber" at the time of withdrawal, all of said patents and patent rights remaining under this agreement, but such withdrawing "subscriber" shall cease to have any rights under the patents of the other "subscribers" hereto, or any other right under this agreement, from and after such withdrawal.

XII. REPURCHASE OF STOCK.

In the event of the death of any person who is a stockholder in the "company," or in the event of the dissolution of any corporation or firm which is a stockholder therein, or in the event of the bankruptcy or insolvency of any such stockholders, or in the event of withdrawal under Paragraph XI hereof, the "company" shall have the right to purchase for the benefit of the other "subscribers" the stock held by such person, firm, or corporation at a sum not to exceed the distributive share or shares of such stockholder in the funds held by the "company," and the license or licenses issued to such stockholder shall be surrendered to the "company" and canceled.

XIII. ARBITRATION OF CLAIMS AND DISPUTES.

In case of any dispute or controversy between the "subscribers" hereto, or between the "subscribers" and the "company," or in case of a claim by a "subscriber" for special compensation for licenses under patents or rights hereafter acquired by it, or in case of breach of this agreement, the said dispute, controversy, claim, or breach shall, within 30 days after a "subscriber" or "subscribers" shall have given notice to the "company" or the "company" shall have given notice to the "subscribers" thereof, be referred to a board of disinterested arbitrators consisting of three persons for determination.

In the case of a claim for special compensation, one member of such board of arbitration shall be appointed by the board of directors of the "company," another by the "subscriber" making the claim, and the third by the other two arbitrators.

In the case of any dispute between the "company" and a "subscriber" or "subscribers," one member of the board of arbitration shall be appointed by the board of directors of the "company," another by the "subscriber" (or if more than one "subscriber" is involved in the same dispute, then by a majority of those so involved), and the third by the other two arbitrators.

In case of a breach of this agreement asserted by the "company" or a "subscriber" against another "subscriber," one member of the board of arbitration shall be appointed by the board of directors of the "company," another by the "subscriber" against whom the assertion of breach is made, and the third by the other two arbitrators.

If either the board of directors or the "subscribers" fail to appoint a member of the board of arbitration within the time specified, the other party or parties may appoint such member or fill such vacancy.

The decision of a majority of the members of said board upon all matters submitted to them for adjudication shall be final and binding upon all the parties hereto.

XIV. RELEASES TO "SUBSCRIBERS."

The "subscribers" hereby waive and release any and all claims which they or any of them may have had against each other for damages and profits on account of any infringement, or alleged infringement, prior to July 1, 1917, of any patent included within this instrument in the manufacture, sale, or use of airplanes.

XV. BINDING UPON PARTIES, CONTROLLED COMPANIES, LEGAL REPRESENTATIVES, ETC.

This agreement is binding upon the parties hereto and their several successors, legal representatives, and assigns, but shall insure to the benefit of only their several successors in business. Each "subscriber" agrees that all persons, firms, and corporations now or hereafter controlled by it, and engaged in the manufacture of airplanes, or owning or controlling United States airplane patents, shall be caused to execute this agreement.

XVI. EXECUTION OF AGREEMENT.

This agreement may be executed by the "subscribers" in any number of counter parts, but when so executed shall constitute but one and the same agreement, and shall be as binding and of the same force and effect as if all the "subscribers" had executed but one and the same instrument and as if all executions had been at the same time.

In witness whereof, the parties hereto have executed this instrument as of the day and year first above written.

MANUFACTURERS' AIRCRAFT ASSOCIATION (INC.),

Attest:

By _____, *President.*
 _____, *Secretary.*

Attest:

Mr. LEA. Also the cross license found on page 6739 of the Congressional Record:

LICENSE.

License, granted this _____ day of _____, 1917, by the (hereinafter called the licensor), to _____ (hereinafter called the licensee).

Whereas the licensor and certain other stockholders of the Manufacturers' Aircraft Association (Inc.) (hereinafter called "Subscribers"), heretofore, entered into a certain agreement dated July 24, 1917, entitled "Cross-license agreement" (a copy of which is hereto annexed), wherein and whereby the licensor agreed to grant certain licenses to the other "subscribers"; and

Whereas the said agreement also authorized and empowered the Manufacturers' Aircraft Association (Inc.), as the agent and attorney in fact of the licensor, to make, execute, and deliver such licenses in the name of the licensor; and it is desired to execute the powers therein granted:

Now, this license witnesseth:

That for and in consideration of the premises and other good and valuable considerations moving between the parties hereto, it is covenanted and agreed as follows:

1. The licensor does hereby give and grant unto the said licensee the unrestricted but nonexclusive license to make, use, and sell airplanes—under all airplane patents of the United States now or hereafter owned or controlled by it, or by any firm, corporation, or association owned or controlled by it, or under which it or any such firm, corporation, or association have or shall have the right to grant licenses—in and throughout the United States, its territories and dependencies for use therein or abroad, except that no rights, express or implied, are hereby granted under any foreign patents, nor shall the licenses herein provided for apply to or include the use of said patents in their application to other than airplanes, and except further

that no licenses are hereby granted under the Dunne patents, No. 975403, issued November 15, 1910, and No. 1003721, issued September 19, 1911, the rights under which are held by the Burgess Co.

The patents, the patents to issue on inventions, and the agreements with reference to which the licensor has a right to grant licenses at the present time, and which are intended to be included in this license are set forth in schedule "A" hereto annexed.

2. This license shall run to the full end of the term of the letters patent under which the license is or is to be granted, and shall be personal, indivisible, nonassignable, and irrevocable, except for the causes and in the manner set forth in the "Cross-license agreement" hereinbefore referred to.

3. This license is made subject to all the terms, conditions, covenants, and agreements contained in said "Cross-license agreement," which is made a part hereof with the same force and effect as if herein set forth at large.

In witness whereof the parties hereto have caused this instrument to be executed as of the day and year first above written.

By _____,
MANUFACTURERS' AIRCRAFT ASSOCIATION (INC.),

Attest:

_____, President.

_____, Secretary.

As Agent and Attorney in Fact of the Licensor.

Attest:

_____,

_____, President.

_____, Secretary.

_____, Licensee.

Schedule A.

I. PATENTS AND INVENTIONS.

Patents No.	Issue date.	Title of invention.

II. PATENT APPLICATIONS.

Serial No.	Filing date.	Other data.

III. PATENT RIGHTS, LICENSES, ETC.

Nature of right.	Inventions.	Date of agreement.

Mr. LEA. When did you first learn of this agreement, or the negotiations for it?

Mr. FAUBER. I can not give you the exact date, but from the newspapers. For instance, I read in the newspapers that the directors of the Wright Co. had offered to submit several of their patents to the Government's own experts. That must have been while the thing was under negotiation, and even before the cross-license agreement was made. In fact, they were holding meetings then. I know something about such meetings being held.

Mr. LEA. For the record I will state that on page 6735 of the Congressional Record will be found a history of the negotiations and

copies of the minutes of the National Advisory Committee for Aeronautics, which had this matter under consideration before the cross-license agreement was entered into, which are as follows:

[Extract from annual report executive committee National Advisory Committee for Aeronautics, 1917.]

THE AERONAUTIC PATENT QUESTION.

On December 18, 1916, the Wright-Martin Aircraft Corporation, as holders of the original patent No. 821393, issued to the Wright Bros. May 22, 1906, addressed letters to all the aircraft manufacturers, inclosing a form of license agreement for the use of the Wright patent, which they claimed was infringed by their manufacture of aircraft.

The terms of this proposed agreement, as stated by other aircraft manufacturers in letters addressed to the committee, were prohibitory, from a business point of view, and also injurious to the development of aircraft and the aircraft industry in the United States.

The chairman reported the correspondence on this subject at the meeting of the executive committee on January 11.

The effect of the proposed action of the Wright Co. was felt by the War and Navy Departments in a pronounced increase in the cost of aircraft. On January 13, 1917, the committee received the following letter from the Acting Secretary of the Navy:

"MY DEAR MR. WALCOTT: I desire to bring to the attention of the executive committee of the National Advisory Committee for Aeronautics a serious state of affairs, which is being brought about by the uncertainty of the situation as regards aeronautic patents.

"Various combinations are threatening all other airplane and seaplane companies with suits for infringements of patents. The result is a general demoralization of the entire trade. It is difficult to get orders filled because some companies will not expend any more money on their plants for fear that suits brought against them will force them out of business.

"To protect themselves in case they are forced to pay large license fees, the companies have greatly increased the sale prices of their products. As the Army and Navy are the principal purchasers of aircraft in this country, they are bearing the brunt of this levy.

"It is thought that the National Advisory Committee for Aeronautics might be able in some way to render great assistance to the Navy by undertaking a study of this question and suggesting some line of action to be taken."

On January 31 the committee received the following letter from the Acting Secretary of War:

"SIR: In connection with the purchase of airplanes for the War Department, it has developed that certain patents which are alleged to be fundamental now appear to render the cost of airplane equipment excessive and, possibly, even to retard the development of the industry in this country.

"This department finds that at present each firm or corporation accepting War Department contracts adds to its bid the extra item of royalty which the firm is required to pay to the owners of the patents. This, among other things, has resulted in what is believed to be excessive prices charged to the Government for airplanes in this country.

"It is believed that this is a subject of such importance as to warrant its immediate consideration by your committee, to the end that a just and equitable solution to all concerned may be reached, which will apply not only to this department, but to all other departments of the Government purchasing airplanes."

In response to a letter requesting his opinion, Mr. Howard E. Coffin, of the Council of National Defense, wrote under date of January 30, 1917:

"I am thoroughly of the opinion that we should take such steps as will open up the Wright patent freely to all manufacturers. It may be wise to use this patent as a rallying point for the industry, but no financial penalty of consequence should be exacted from individual manufacturers. It is only through some such arrangement as will permit the free extension of commercial possibilities of aircraft through civilian channels that we may hope to build up a proper volume of business over a period of years.

"In short, I believe we can and must arrange for a purchase of this patent on the part of the Government at a reasonable figure before we can hope to develop a quantity manufacture of aircraft."

A special meeting of the executive committee was held February 1, at which the chairman presented the complete record of the patent question to date for the action of the committee.

The committee discussed the advisability of recommending legislation to authorize the purchase and condemnation of such patents as may be considered necessary to the manufacture and development of aircraft.

Another special meeting was held on February 3, 1917, at which Messrs. E. F. Hagar and Frederick P. Fish, president and counsel, respectively, of the Wright-Martin Aircraft Corporation, were present on invitation.

The chairman stated that this special meeting had been called to obtain the views of the Wright-Martin Aircraft Corporation in relation to the Wright patents, and, if possible, reach some understanding that would encourage development in the industry.

At this meeting it developed that Mr. Wright has no interest whatever in the Wright Martin Aircraft Corporation, having been paid a little more than a million dollars in cash for his patent; that this patent was used as a basis for interesting capital in the new company in the belief that it was basic and fundamental.

The Wright representative stated that they believed the required license fee of \$10,000 a year was equitable, and that any manufacturer who could not afford to pay it was not in a position to help in the development of the industry along scientific lines, and that, in other words, the manufacturer with a limited amount of capital invested in his business could not possibly make airplanes successfully in the present advancing state of the art.

They explained the position taken by their company and reviewed the history of its formation. They stated that their basic idea was to develop an aeronautic engine superior to any other in existence, and that to this end they were expending large sums of money in a scientific study of the problems involved, at a total of approximately half a million dollars monthly for all purposes, and were endeavoring to gather into their organization the best available talent.

After three hours' discussion, during which the position of the Government was clearly explained by the committee, the representatives of the Wright company expressed a willingness to cooperate with the Government in any way that would promote the development of the industry, and stated that they desired to clear the industry of fear of patent litigation.

Various suggestions were discussed as to the terms under which this cooperation could be effected.

A special meeting was also held on the following day, Sunday, February 4, 1917, at the residence of the chairman, at which the steps thus far taken were reviewed and discussed.

As a result of careful deliberation, a letter to the President was prepared and transmitted under date of February 5, 1917. With this letter the chairman inclosed copies of the letters of the War and Navy Departments previously referred to; a copy of the letter of the Wright-Martin Aircraft Corporation of December 18, 1916, together with the application for license and form of agreement; and extracts from letters received from six aircraft manufacturers in the United States expressing their views of the situation.

This letter contained a brief review of the situation and a recommendation that legislation be approved in the form of an amendment to either the military or naval bill authorizing the Secretary of War to secure by purchase, condemnation, donation, or otherwise, such basic patent or patents as he may consider necessary to the manufacture and development of aircraft in the United States and its dependencies for governmental and civil purposes, under such regulations as the Secretary of War may prescribe.

After approval by the President, the recommendations of the committee were transmitted by the Secretary of the Navy to the chairman of the House Naval Affairs Committee.

On February 20, 1917, letters were addressed to the larger aircraft and engine manufacturers requesting the submission of lists of all patents owned or controlled by them which pertain to aircraft or parts of aircraft.

A meeting of the subcommittee on governmental relations was held on February 24, at which Messrs. Walcott, Stratton, Squier, Marvin, and Coffin were present; also Mr. John P. Tarbox, patent attorney for the Curtiss Aeroplane & Motor Corporation. The purpose of the meeting was to ascertain the number and nature of the aeronautic patents owned or controlled by the Curtiss Co. From the data exhibited by Mr. Tarbox it appeared to the committee that the patent situation in the aeronautic industry was relatively simple as compared with that formerly existing in the automobile industry; that the Curtiss Co. owned a comparatively large number of patents

that the Wright-Martin Aircraft Corporation owned a possibly basic patent; and that there were but very few other scattering patents, none of which was of great importance.

Mr. Tarbox stated that Mr. G. C. Loening, of the Sturtevant Aeroplane Co., has a patent on a bridge-type landing gear, but that it is not of a controlling nature. He stated that he knew of no patents other than those owned by the Curtiss and Wright companies that might be considered basic. He stated that the Curtiss Co. had two controlling patents at present and expected to have a third in the near future. The first one (No. 1203550) covers a hydroaeroplane as regards longitudinal balance; the second patent, known as the "flying boat" patent, covers the relation of the position of the hull step to the center of pressure, the center of gravity, and the center of thrust; and the third patent will cover the single, central, mail float type, with two side floats. He stated that Mr. Curtiss has had no idea of demanding royalties from other manufacturers under existing conditions or of using his patents against competitors; that his purpose in obtaining patents was to fortify and defend himself in any patent litigation that might be started by others.

The naval appropriation act of 1918 contained the following provisions under the appropriation "Aviation":

"To enable the Secretary of War and the Secretary of the Navy to secure by purchase, condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States and its dependencies, for governmental and civil purposes, under such regulations as the Secretary of War and the Secretary of the Navy may prescribe,, \$1,000,000.

"*Provided*, That such arrangements may be made in relation to the purchase of any basic patent connected with the manufacture and development of aircraft in the United States as in the judgment of the Secretary of War and the Secretary of the Navy will be of the greatest advantage to the Government and to the development of the industry.

"*Provided further*, That in the event there shall be pending in court litigation involving the validity of said patent or patents, bond, with good and approved security in an amount sufficient to indemnify the United States, shall be required, payable to the United States, conditioned to repay to the United States the amount paid for said patent or patents in the event said patent or patents are finally adjudged invalid."

In letters dated March 10, 1917, the attention of the Secretary of War and the Secretary of the Navy was invited to the foregoing provision in the naval act, and the committee stated that it hoped to effect such arrangements for the solution of the patent question without the necessity of purchasing or condemning any patents.

On March 22, 1917, the subcommittee on patents held a meeting, at which a suggested plan for the solution of the patent question was adopted. The committee then called in representatives of the Wright-Martin and Curtiss companies and the Aircraft Manufacturers' Association and submitted for discussion the terms of the suggested agreement, which, it was pointed out, were merely suggestions.

On March 23, 1917, the subcommittee on patents submitted the following report reviewing the steps taken up to date and suggesting a plan for the solution of the patent question:

"On March 2, 1917, Congress appropriated \$1,000,000 'to enable the Secretary of War and the Secretary of the Navy to secure by purchase, condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States for governmental and civil purposes.' This action was taken on account of the general belief that the needed expansion of the aircraft industry, calling for the investment of large sums of money, was being very seriously impeded by threatened lawsuits and the demand for the payment of what was looked upon as excessive royalties under certain important aeronautical patents. One such demand upon the manufacturers called for a royalty of 5 per cent on the price of the complete plane with motor and a minimum annual payment of \$10,000 per manufacturer.

"All makers in bidding for Government business were obliged to add to their bids an extra amount representing the royalty they would have to pay under this one patent alone, and the Army and Navy were confronted with many bids in which the contingent royalty amounted to over \$1,000 per aeroplane.

"The National Advisory Committee for Aeronautics, in whose hands the problem was placed for recommendation, realized that it would be undesirable to use the fund provided for the purchase of patent until every means had been exhausted to secure a settlement on a reasonable basis between the different parties in interest. It realized that even in our present need it would be unwise to condemn a patent except as a last resort. The National Advisory Committee for Aeronautics is par-

ticularly anxious to encourage invention along aeronautical lines instead of discouraging it.

"In reviewing the records of the Army and Navy Departments as to planes purchased during the eight years prior to our recent heavy appropriations for aerial defense, it was brought out that four men in four different factories supplied all of those planes and apparently contributed most in the development and reduction to practice of the aviation art. Those named in the order of their appearance on the records are Wright, Curtiss, Burgess, and Martin. By a strange coincidence, Curtiss and Burgess joined hands, and later the Wright and Martin interests came together.

"While there are other aircraft patents, it was found that these two combinations owned and controlled what might be considered the two dominating groups of patents.

"The national advisory committee has therefore been influenced to a slight extent in its consideration of the patent question by the moral obligation that should be added to the patent rights of these two groups. Recognition of the two groups of patents by the later industry and by the Government becomes automatically recognition of practically all of the actual reduction of the art to practice by Wright, Curtiss, Burgess, and Martin.

"Numerous meetings were held in New York, Buffalo, and Washington, in an endeavor to arrive at a basis of settlement that would comprehend all of the patents owned or controlled by each group, that would be a fair recognition of their patent rights and that would at the same time cement together and strengthen the industry.

"The plan finally agreed upon by the committee and submitted to the two companies for their consideration and early report is framed upon the following basis:

"First. That it is desirable to avoid the delays and expense necessary to adjudicate all of the patents in question.

"Second. That it is not within the province of this committee to attempt to determine the value of one patent against another or the validity of any patent.

"Third. That it is desirable at once to arrive at some fair basis for the recognition of the patents of both parties that will clear up this matter and permit the more rapid expansion of the industry.

"Fourth. That the relative contributions to the establishment of the aircraft industry as between Wright and Martin on the one hand and Curtiss and Burgess on the other hand may be paid to offset each other, and that the recognition of each should be in the same total amount.

"Fifth. That by reason of Curtiss's patents running approximately three times as long as Wright's, the royalty to the Curtiss-Burgess group might be made about one-third of the amount per plane to be allowed to the Wright-Martin group.

"Sixth. That instead of endeavoring to establish a difference as between an airplane, seaplanes, or flying boat, the royalty should be spread uniformly upon all three types.

"Seventh. That the royalty should be a flat rate on each plane with or without engine instead of a percentage of cost or selling price.

"Eighth. That royalty should commence upon all planes manufactured and sold after March 2, 1917, and that those manufactured and sold prior to that date be exempted from royalty.

"In submitting this plan, the National Advisory Committee for Aeronautics have not attempted to draw up a finished legally approved agreement, but instead to present its plan in the simplest possible form.

PROPOSED PLAN.

"First. That all airplane manufacturers as members of the Aircraft Manufacturers' Association join in a cross-licensing agreement as of March 2, 1917.

"Second. That this agreement cover all patents now owned or controlled by or which may later be owned or controlled by the Aircraft Manufacturers' Association or any of its members; the terms of the cross-licensing agreement to be in general based upon the similar agreement existing in the National Automobile Chamber of Commerce known as the cross-licensing agreement.

"Third. That each member pay into the treasury of the Aircraft Manufacturers' Association the sum of \$200 for each airplane manufactured and sold (with or without engine) by that member, these payments to be made quarterly, and to continue subject to the conditions hereinafter provided.

"Fourth. That the funds thus collected be disposed as follows:

"At each quarterly period for each airplane manufactured and sold during the preceding quarter there shall be paid, \$135 to the Wright-Martin Aircraft Corporation, \$40 to the Curtiss Aeroplane & Motor Corporation, and \$25 to the treasury of the Aircraft Manufacturers' Association, to cover its operating expenses and to create a fund for further development.

"Fifth. Payment to the Wright-Martin Aircraft Corporation shall cease May 22, 1923, and payment to the Curtiss Aeroplane & Motor Corporation shall cease at such time as the total amount paid to them shall equal the amount paid to the Wright-Martin Aircraft Corporation, but in any event shall cease October 30, 1933.

"Sixth. After May 22, 1923, the amount paid per airplane by each manufacturer shall be reduced by the amount of the Wright-Martin royalty, which will have ceased on that date and shall thereafter be \$65 per airplane manufactured and sold during such remaining period as payments of royalty are made to the Curtiss Aeroplane & Motor Corporation, as above provided for.

"Seventh. An airplane as herein mentioned shall be understood to mean any form of heavier-than-air craft using wing surfaces for sustentation, stabilizing surfaces, rudders for steering, and power plant for propulsion through the air, whether operated from land or water."

On the same date copies of the report of the subcommittee on patents were sent to the Secretaries of War and the Navy, the Wright and Curtiss companies, and the Aircraft Manufacturers' Association.

At a meeting of the subcommittee on patents on April 24, 1917, it was recorded as the sense of the meeting that the Aircraft Manufacturers' Association should undertake the negotiations necessary to effecting a cross-licensing agreement, and that this committee is willing at the present time to assist in an advisory capacity only, and the Aircraft Manufacturers' Association was so advised.

After the appointment of Messrs. Crisp and Fish as members of the subcommittee on patents efforts were made to bring these gentlemen together in conference to work out the details of the suggested agreement.

No action having been taken by the Aircraft Manufacturers' Association or the respective interested parties, the executive committee, on June 14, authorized the patents committee to take whatever steps appeared necessary to effect a solution of the question, and recommended that in the matter of royalties to be paid to the Wright and Curtiss companies a reasonable maximum be agreed to, not to exceed \$2,000,000 to each company.

At the meeting of the executive committee on June 14, 1917, there were present Messrs. Walcott, Stratton, Durand, Marvin, Squier, Taylor, Towers, Richardson, Foullois, Waldon, Coffin, and others.

After presentation of the report of the patents committee and discussion of the question, on motion duly seconded and carried it was—

"Resolved, That the patents committee be authorized to take whatever steps appear necessary to effect a solution of the patent question, and that the executive committee recommend that in the matter of royalties to be paid the Wright and Curtiss companies a reasonable maximum be agreed to, not to exceed \$2,000,000 to each company, and further, that the patents committee be instructed to hold a meeting on Monday, June 18, to consider this question to which representatives of the Wright and Curtiss companies and of the Aircraft Manufacturers' Association should be invited."

The subcommittee on patents accordingly held a meeting on June 18, at which representatives of the Wright and Curtiss companies and of the Aircraft Manufacturers' Association were present.

At this meeting the provisions of the plan suggested on March 23, 1917, were taken as the basis for discussion and all phases of the general proposition were canvassed.

The members of the patents committee withdrew for an executive session, at which after deliberation and on motion duly seconded and unanimously carried, the following report was adopted:

"It is recommended that the 'proposed plan' for the solution of the patent situation between the Wright-Martin and Curtiss-Burgess groups, as submitted in the report of the patents committee dated March 23, 1917, be followed out in all essentials with the following exceptions:

"a. It is recommended that the agreement be not made retroactive to March 2, 1917, but be made to take effect July 1, 1917.

"b. That in no case shall there be more than \$2,000,000 paid to either the Wright-Martin or the Curtiss-Burgess groups."

The above report was presented to the manufacturers, and it was accepted without reservation by the Curtiss Co. and by the Wright Co., with a reservation as to sub-licensing the Hispano-Suiza engine.

The committee discussed the subject of compensation to aircraft manufacturers for the placing by the Government with other manufacturers the plans, specifications, heat treatments, factory methods, etc., of any manufacturer's design of airplane.

After discussion and deliberation, it was recorded as the sense of the meeting that separate agreement from the proposed cross-licensing agreement should be arranged for by the Aircraft Manufacturers' Association covering the use by any one manufacturer of the designs of another manufacturer at the request of the Government.

That the amount of such compensation between manufacturers should be 1 per cent of the price of the airplane, exclusive of engine, to be paid by the manufacturer ordered by the Government to produce an airplane designed and developed by some other manufacturer to the manufacturer who had so designed and developed it.

That in no case should there be paid to any one manufacturer a sum totaling more than \$50,000 for the designs, specifications, heat treatments, and other factory methods upon any one type of airplane.

The object of each manufacturer in maintaining a laboratory is to develop designs satisfactory to the Government that will enable him to obtain the maximum capacity of his factory in Government business.

The object of the above plan is to encourage development to the greatest degree and to provide a simple working basis whereby the manufacturer successful in producing a type of airplane so satisfactory to the Government that his own facilities are insufficient to meet the Government's needs will receive compensation in a moderate amount per airplane upon such airplanes as are made under Government order by other manufacturers.

It was further suggested that this same basis be used where developed designs of engine are introduced into other factories than the ones that designed and developed them.

The meeting adjourned with the understanding that Mr. Crisp would prepare a form of agreement after further discussion. The minutes of the meeting were sent to all parties in attendance.

The subcommittee on patents met on July 10 to consider the terms of the draft of proposed cross-license agreement as prepared by Mr. Crisp, after consultation with Mr. Fish and the latter's business partner, Mr. Neavo, and Messrs. Houston, Tarbox, Flint, and Russell.

This meeting was attended by officers and members of the Aircraft Manufacturers' Association and representatives of the Wright and Curtiss companies. Mr. Crisp submitted a draft of the proposed cross-license agreement and explained that the plan as originally proposed by the Patents Committee had been modified in the following important particulars:

First. All reference to engines and engine accessories was omitted, for the reason that the principal engine patent—Hispano-Suiza—could not be included in the agreement because of restrictions in the special contract between the Wright-Martin Aircraft Corporation and the owners of the patent, and for the further reason that engine patents in common use in this country were not considered basic.

Second. That after \$2,000,000 had been paid to the Wright-Martin company the subscribers to the agreement would continue to pay \$200 per airplane, and that payments of the balance then due the Curtiss company would be made at the rate of \$175 per airplane—this with a view to clearing up the situation as quickly as possible.

Third. That the agreement contemplates additional consideration to a party or parties who may develop hereafter an airplane or engine or any device of special importance capable of use in an airplane, which would also include, first, a new basic type of airplane; second, one which involves a great improvement on the principles existing in the industry; and, third, an airplane radical in its departure from existing types.

The provisions of the proposed agreement were generally discussed.

By resolution of the meeting the chairman appointed a committee of five on requirements for membership in the Aircraft Manufacturers' Association, with instruction to give careful attention to the legal phases of limitation of stock ownership in such a corporation.

The committee, as appointed by the chairman, consisted of Messrs. Crisp (chairman), Harris, Mingle, Russell, and Houston. After an executive session the committee on qualifications for membership submitted the following report, which was adopted:

"A stockholder of this corporation shall be a responsible manufacturer of airplanes, airplane engines or parts and accessories used in airplanes; a responsible manufacturer who intends to become a bona fide producer of airplanes or airplane engines, parts, or accessories; or a manufacturer to whom the Government has given a contract for the construction of 10 or more complete airplanes or airplane engines; but no stockholder herein shall acquire or own more than one share of the stock of said corporation."

By resolution adopted by a divided vote it was recorded as the sense of the meeting that engines should be included in the terms of the cross-license agreement. This necessitated redrafting the cross-license agreement, and there being no objection, the chairman appointed a special committee for this purpose, consisting of Messrs. Crisp (chairman), Tarbox, Houston, Mingle, and Russell.

The subcommittee on patents held another meeting July 12, 1917, immediately preceding the regular monthly meeting of the executive committee. The chairman

reported that an informal session of the subcommittee on patents on the preceding evening, at which Messrs. Durand, Crisp, Waldon, Towers, Tarbox, Houston, and Harris were present, the various features of the proposed cross-license agreement were discussed. Mr. Crisp laid before the committee a draft of the proposed cross-license agreement prepared in accordance with the recommendation of the conference on the preceding evening.

The chairman reported that an attempt to include the cross licensing of engines under the terms of the cross-license agreement, as recommended by the conference held on July 10, developed many difficulties of a practical nature, especially in regard to the proper payments for the support of the proposed organization as between the engine manufacturers and plane manufacturers. He reported that it had also been suggested at the conference on July 11 that the advantages of cross licensing of engines might better be realized through necessary modifications in the existing cross-license agreement covering the automobile industry. He reported further that as a result of these considerations members of the committee present at the conference on July 11 took action recommending the omission of engines from the terms of the cross-license agreement and instructed Mr. Crisp and his associates to prepare the final draft of the cross-license agreement in accordance with this recommendation.

After consideration of this recommendation of the conference on July 11 and after further consideration of all factors bearing upon the question the proposed draft of cross-license agreement as submitted by Mr. Crisp was, on motion duly seconded, unanimously approved and recommended to the executive committee for its approval.

At the meeting of the executive committee on July 12 the subcommittee on patents submitted the approved draft of cross-license agreement, which the chairman stated in its general terms and details had already received the informal approval of the aircraft manufacturers, and this he submitted as the report of the subcommittee on patents with a recommendation for its approval by the executive committee.

On motion, duly seconded and carried, it was

"Resolved, That the report of the patents committee on the proposed cross-license agreement be approved."

Under date of July 27 the chairman addressed letters to the Secretary of War and the Secretary of the Navy reporting the solution of the patent question and inclosing a copy of the cross-license agreement which had been accepted by the aircraft manufacturers and signed by them as members of a new "Manufacturers' Aircraft Association."

On the same date the chairman addressed a letter to the president of the Manufacturers' Aircraft Association recommending the acceptance of the cross-license agreement by the association and its members and that aircraft manufacturers generally be invited to subscribe to same in the interests of harmony and efficiency and to the end that the industry may be enabled to expand freely in order to meet the demands of the Government for the quantity production of aircraft.

The subcommittee on patents was discharged on August 7, 1917.

THE WORK OF THE SUBCOMMITTEE.

Following is an outline of the general work of the various subcommittees during the past year:

Aerial mail service: The subcommittee on aerial mail service was authorized by the executive committee at the meeting on December 7, 1916, for the purpose of cooperating with the Post Office Department in accordance with the request of the Second Assistant Postmaster General. The committee as originally organized consisted of Messrs. Squier (chairman), Marvin, and Stratton, and on March 30, 1917, Messrs. Clark and Towers were added.

The committee held a meeting on January 9, 1917, at which a representative of the Post Office Department was present. A plan of cooperation was formulated and means of overcoming difficulties confronting the Post Office Department were discussed. The committee advised the Post Office Department that in its opinion it would be impractical at that time to place a contract for aerial mail service, and that therefore the Post Office Department should take the initiative and establish such service within its own organization, and that the first experimental route should be selected with a view to inaugurating the service under as favorable conditions as possible. The committee suggested that the first experimental route should be between Washington and Philadelphia or Washington and New York.

Mr. LEA. I wish you would, as briefly and as clearly as you can, point out what you regard as the undesirable features of this contract.

Mr. FAUBER. To begin with, the nature of the contract operates—I will not say to invalidate, because that is not the word, but to defeat the purpose of the United States patent laws.

Mr. LEA. In what respect?

Mr. FAUBER. First, I should say, because in an arbitrary manner and without due process of law before a patent court the cross-license agreement had the effect of making the Wright and the Curtiss patents fundamental in the art. The Wright patent had been litigated and sustained. There was some reason, perhaps, for recognizing the Wright patent, although that had not been finally litigated.

Mr. LEA. In substance, there was pending a controversy between the Wright-Martin Co. and the Curtiss Co. as to who had the legal right to certain patent rights claimed to be basic?

Mr. FAUBER. No; as to whether the Wright patents were valid or not.

Mr. LEA. Yes; there was a question as to who owned them in the first place, however?

Mr. FAUBER. No; Curtiss attacked the Wright patent on the question of validity, and my personal opinion is that if Curtiss had known how to fight the Wright patent he might have displaced the patent.

Mr. LEA. In order to get the facts from you, let me ask: There were a great many patents held at the beginning of this war concerning airplanes and airplane engine parts—

Mr. FAUBER (interposing). Not a great many.

Mr. LEA. And designs?

Mr. FAUBER. No; there were very few basic patents.

Mr. LEA. But there were a great many patents concerning all devices, regardless of whether or not they were basic?

Mr. FAUBER. Possibly; there were some.

Mr. LEA. I do not mean to state that myself, but want to know about it.

Mr. FAUBER. The art, as compared to the automobile, is limited.

Mr. LEA. The right to manufacture under those patents, I presume, was essentially an important matter, essentially important in the matter of getting airplanes, or, I should say, essential to a rapid or efficient handling of airplane manufacture, was it?

Mr. FAUBER. Well, the Government could have gone ahead and used the Wright patents and the Curtiss patents, just as they used my patent, and the matter could have been settled in the Court of Claims afterwards.

Mr. LEA. Yes; I think there is no question about that, but—

Mr. FAUBER (interposing). None whatever.

Mr. LEA. But, to establish the first point, I presume there was necessity for using these patents?

Mr. FAUBER. There was necessity for building airplanes, but there was necessity to understand the situation. There was always the question whether these patents were being used by the Government or not, because they had not been adjudicated.

Mr. LEA. To get that in shape the rights should have been cleared up?

Mr. FAUBER. Yes; the rights should have been cleared up by the persons in the courts in a proper manner, and not in an arbitrary and secret manner and to the detriment of the industry.

Mr. LEA. Well, I was not contending about that at the present time.

Mr. FAUBER. Yes; if you assume that the Wright patent is valid. And they certainly have, through the cross-license agreement, control of the situation.

Mr. LEA. Can you state whether or not at the present time there are any manufacturers of aircraft in the United States who are not members of this association?

Mr. FAUBER. I think there are. I think, for example—as a matter of fact Glen Martin told me he had not joined the association. He told me that during the aero show in New York.

Mr. LEA. Do you know about the extent of their products or capacity?

Mr. FAUBER. Glen Martin was, and I think he is yet, a stockholder of the Wright-Martin Co. Of course they bought his business, and then he left the company for reasons of his own, and organized a company in Cleveland. I do not know how much business he is doing, but he built some considerable machines, involving some little money.

Mr. LEA. Have you heard any complaint from these independent manufacturers about this agreement?

Mr. FAUBER. I can not recall having talked to any of them. As a matter of fact the independent manufacturers did not know very much about this cross-license agreement.

Mr. LEA. Here is one feature, if you have given attention to it, that I would like to get your view on: In what way can an independent manufacturer become a member of the Manufacturers Aircraft Association (Inc.)?

Mr. FAUBER. Under date of December 21, 1917, I have this letter from the Manufacturers' Aircraft Association, and, by the way, I have a copy prepared for you if you care for it.

Mr. LEA. If the examination shows that it is relevant to this matter I would like to have it put in.

Mr. FAUBER. The point is that copies of this whole correspondence have been furnished to the Hughes committee and the Thomas committee, and they ought to be in your possession.

Mr. LEA. Then you can give me a copy of it.

Mr. FAUBER. Answering your question, the qualifications for becoming a stockholder or member are as follows: (1) Applicant to be a responsible manufacturer of aircraft or aircraft engines or parts and accessories thereof; or (2) a responsible manufacturer who intends to become a bona fide producer of the same, or a manufacturer to whom the United States Government has given a contract for the construction of 10 or more complete aeroplanes or aeroplane engines; or (3) any person, firm, or corporation owning or controlling United States patents relating to any of the foregoing.

Mr. LEA. My point is that, assuming an applicant for membership possesses the qualifications you have designated, is he by that fact alone entitled to admission to the Manufacturers' Association, or is it discretionary with the association as to whether or not they will admit him to membership?

Mr. FAUBER. Take my own case as an example: Under qualification No. 3 I, as the owner of patents relating to aircraft, desiring to become a member of the organization, can only become a member subject to their consent. As a matter of course, I would be required to purchase \$1,000 of some kind of stock in the association, and I

would be required to submit my patents to arbitration as to the value of my patents. I would have the opportunity of selecting one arbitrator, the association another, and those two would select a third who finally arbitrate the patents. Now, I have never been able to get from this association, either in correspondence or verbally, a statement as to whether the value of my patents would not first be limited before they would be subject to arbitration, because if they did not put a limitation on them how could they pay for them out of the \$25? Do you see?

Mr. LEA. Yes. I do not know that you exactly get the point that I want. The United States, as I understand it, consented to this agreement.

Mr. FAUBER. Yes.

Mr. LEA. Does this agreement leave it to the discretion of this association to bar any independent manufacturer in the United States?

Mr. FAUBER. I should say that it does, absolutely, because they can easily find an excuse to bar him regardless of what that says, and they have the National Advisory Committee to recommend who the orders should be placed with.

Mr. LEA. Assuming that the patents of this association are necessary to the successful manufacture of aeroplanes, this organization would, in fact, be a trust?

Mr. FAUBER. Absolutely; I should say so.

Mr. LEA. Have you given careful attention to the question whether or not they have got the discretion to bar anybody from membership? Is there any provision either in there or is it the practice to bar anybody that they wanted to from membership, whether they had those qualifications which are prescribed for membership or not?

Mr. FAUBER. I do not know of any one owning patents who has become a member of the association. There may be some one, but I doubt it. I know, for example, that the Aero-Marine Co., who were manufacturers, went into the association as a matter of good business policy, they thought, because they could get the business and because Mr. Uppercue was a member of the association. On December 4 or 5, in Judge Chatfield's court, in Brooklyn, I met Mr. Curtiss, whom I know personally quite well, and he told me that he did not know but he would have been better off if he had not gone into the association; but that does not correspond with his statements later, by any means, because on a later date he upholds the association. It is apparent to me from my knowledge of the history of the matter and from the agreement itself that Curtiss was to some extent possibly forced into the association because of the danger of the Wright patents. The proof of that and also the proof of the estimation which the Wright Co. placed on the Curtiss patents is contained in the terms of the agreement itself, wherein the Wright Co. substantially gets their money first and the Curtiss Co. get their money afterwards.

Mr. LEA. In the practical workings of this association have you known of any case in which a manufacturer was denied the right to become a member?

Mr. FAUBER. I have not. I do not recall at this moment if I do know it.

Mr. LEA. Here is another feature: Assuming that this Manufacturers' Association had the power to deny the use of these patents to any independent manufacturer, or suppose they have that right at the present time under peace conditions, that is the same right that an owner of a patent has independent of this agreement, is it not?

Mr. FAUBER. Oh, yes; but this association comes under a different heading from an independent owner of a patent in a measure.

Mr. LEA. Does the situation created by this association make it any more difficult for an independent person to get the use of these patent rights than it would from an unwilling owner of a patent outside of the association?

Mr. FAUBER. I should say it does.

Mr. LEA. In what way?

Mr. FAUBER. Because in this case it appears to me that two companies have substantially arranged to control the business, merely admitting a few other companies to make the association look like an association that is free to any manufacturers.

Mr. LEA. Did not practically every manufacturer of aircraft in the country enter this association during the war?

Mr. FAUBER. They had to and were recommended to in order to get orders. They were advised to by the Thomas Committee. That is the only way they could get business.

Mr. LEA. In what way did the Wright-Martin Co. and the Curtiss Co. retain the control of the organization if it had so many members?

Mr. FAUBER. I could not answer that because I do not know the inside workings of the agreement. There is some sort of a voting trust. It is pretty certain that these two concerns controlling an association like that have to retain the controlling power.

Mr. LEA. Have you seen any agreement as to what you call the voting trust?

Mr. FAUBER. I have not.

Mr. LEA. What evidence have you that such an agreement exists?

Mr. FAUBER. I do not know whether there is any in the record or not. Perhaps the record shows that.

Mr. LEA. What knowledge have you as to that; is that your conclusion from the way things are managed, or is it based on specific information.

Mr. FAUBER. No; I have read that somewhere. I do not know whether it was in this record; I do not know how I got that. I read it. I think possibly the agreement gives you that.

Mr. LEA. Is it your judgment that the amount paid for these patent rights is in excess of their value; that is to say, to the United States during the war?

Mr. FAUBER. I have never questioned the value of amounts paid for patents.

Mr. LEA. That really is not the point you are making?

Mr. FAUBER. No; I would question the value of the Curtiss patent, at least the patent which is made the basic patent here. I have no knowledge of what other Curtiss patents are put in the agreement. I think I know what the Curtiss patents are, as much as I have been able to get out of the Patent Office records.

Mr. LEA. In other words, the question of compensation is a minor matter?

Mr. FAUBER. Absolutely.

Mr. LEA. It is the principle involved?

Mr. FAUBER. It is the principle; the question of compensation for patents may be important to the inventor, but it is a matter of small importance to these larger corporations. I want to call your attention to a statement in the record, the annual report of the national advisory committee, on page 6736 of the Congressional Record of May 9, 1918. It says:

At this meeting it developed that Mr. Wright has no interest whatever in the Wright-Martin Aircraft Corporation, having been paid a little more than a million dollars in cash for his patent; that this patent was used as a basis for interesting capital in the new company in the belief that it was basic and fundamental.

I believe that that statement is not to the best of my knowledge a true statement of fact, because this price of a little more than \$1,000,000 included beside the patent itself the Wright Co.'s factory, machinery, the Wright Co.'s aviation field, and the name and various assets, aside from the patent which had a value, including an annual retainer fee of \$25,000 a year which was to be paid to Wright, and which I think the Wright-Martin Co. wanted to get rid of.

Mr. LEA. Do you know when that patent was sold to the Wright-Martin Co.?

Mr. FAUBER. I can check that up, because I know absolutely; I saw Orville Wright shortly before that.

Mr. LEA. Was that before the war, or after?

Mr. FAUBER. That was before the war.

Mr. LEA. Was that a transfer in anticipation of the war?

Mr. FAUBER. No. That was purely a business proposition on the part of certain men who bought the patent. I know a man who had something to do with the selling of the patent and he told me the price was \$500,000 for the patent—so that this statement, I believe, is purposely intended to mislead, because there are other misleading statements in this report of the National Advisory Committee.

Mr. LEA. Anyway, the result was as inaccurate and misleading, whether it was the intention or not?

Mr. FAUBER. Yes.

Mr. LEA. Do you emphasize the question of intention there or not?

Mr. FAUBER. I believe it was the intention to show that the Wright Co. had paid \$1,000,000 for the patent, absolutely paid that amount of money; that in getting \$2,000,000 they were getting only what they were perhaps entitled to. I believe that was the intention.

Mr. LEA. Do you know who was the author of this statement you have referred to?

Mr. FAUBER. I do not.

Mr. LEA. Are you personally familiar with the negotiations and history of this agreement prior to its having been entered into?

Mr. FAUBER. Absolutely not.

Mr. LEA. In view of that fact I think it would be proper to insert as an exhibit in the record a portion of the Congressional Record beginning at page 6735 under date of May 9, 1918, beginning with a communication addressed to Senator Thomas in column 2 and extending down to the form of license found at column 1 at page 6739.

(The portion of the Congressional Record above referred to is marked "Exhibit No. 106, Fauber.")

EXHIBIT No. 106 (FAUBER).

[Act of Mar. 4, 1917.]

To enable the Secretary of War and the Secretary of the Navy to secure by purchases condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States and its dependencies for governmental and civil purposes, under such regulation, as the Secretary of War and the Secretary of the Navy may prescribe, \$1,000,000.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS,
Washington, D. C., April 11, 1918.

HON. CHARLES S. THOMAS,
United States Senate, Washington, D. C.

DEAR SENATOR THOMAS: Replying to your letter of the 10th instant, requesting certain information as to the cross-license agreement of the Manufacturers' Aircraft Association, dated July 24, 1917, you are advised that Messrs. Fish and Crisp served as members of our subcommittee on patents, which consisted also of Messrs. Walcott, Stratton, Towers, Waldon, and Durand.

Messrs. Fish and Crisp had previously served as attorneys for the Wright and Curtiss companies, respectively, in their suit over the validity of the Wright patents. These men were not appointed on the committee until after the important features of the then proposed agreement had been decided upon, and they were selected to assist in the preparation of the agreement in legal form, partly because of their familiarity with the general subject of aeronautic patents, and partly because of their familiarity with the cross-license agreement adopted by the National Automobile Chamber of Commerce.

For your further information I am inclosing an extract from the last Annual Report of the Executive Committee of the National Advisory Committee for Aeronautics bearing on the aeronautic patent question (pp. 12 to 25, inclusive).

Very truly, yours,

J. F. VICTORY, *Assistant Secretary.*

[Extract from annual report executive committee National Advisory Committee for Aeronautics, 1917.]

THE AERONAUTIC PATENT QUESTION.

On December 18, 1916, the Wright-Martin Aircraft Corporation, as holders of the original patent No. 821393, issued to the Wright Brothers May 22, 1906, addressed letters to all the aircraft manufacturers, inclosing a form of license agreement for the use of the Wright patent, which they claimed was infringed by their manufacture of aircraft.

The terms of this proposed agreement, as stated by other aircraft manufacturers in letters addressed to the committee, were prohibitory, from a business point of view, and also injurious to the development of aircraft and the aircraft industry in the United States.

The chairman reported the correspondence on this subject at the meeting of the executive committee on January 11.

The effect of the proposed action of the Wright Co. was felt by the War and Navy Departments in a pronounced increase in the cost of aircraft. On January 13, 1917, the committee received the following letter from the Acting Secretary of the Navy:

"MY DEAR MR. WALCOTT: I desire to bring to the attention of the executive committee of the National Advisory Committee for Aeronautics a serious state of affairs which is being brought about by the uncertainty of the situation as regards aeronautic patents.

"Various combinations are threatening all other airplane and seaplane companies with suits for infringements of patents. The result is a general demoralization of the entire trade. It is difficult to get orders filled because some companies will not expend any more money on their plants for fear that suits brought against them will force them out of business.

"To protect themselves in case they are forced to pay large license fees, the companies have greatly increased the sale prices of their products. As the Army and

Navy are the principal purchasers of aircraft in this country they are bearing the brunt of this levy.

"It is thought that the National Advisory Committee for Aeronautics might be able in some way to render great assistance to the Navy by undertaking a study of this question and suggesting some line of action to be taken."

On January 31 the committee received the following letter from the Acting Secretary of War:

"SIR: In connection with the purchase of airplanes for the War Department, it has developed that certain patents which are alleged to be fundamental now appear to render the cost of airplane equipment excessive and, possibly, even to retard the development of the industry in this country.

"This department finds that at present each firm or corporation accepting War Department contracts adds to its bid the extra item of royalty which the firm is required to pay to the owners of the patents. This, among other things, has resulted in what is believed to be excessive prices charged to the Government for airplanes in this country.

"It is believed that this is a subject of such importance as to warrant its immediate consideration by your committee, to the end that a just and equitable solution to all concerned may be reached, which will apply not only to this department, but to all other departments of the Government purchasing airplanes."

In response to a letter requesting his opinion, Mr. Howard E. Coffin, of the Council of National Defense, wrote under date of January 30, 1917:

"I am thoroughly of the opinion that we should take such steps as will open up the Wright patent freely to all manufacturers. It may be wise to use this patent as a rallying point for the industry, but no financial penalty of consequence should be exacted from individual manufacturers. It is only through some such arrangement as will permit the free extension of commercial possibilities of aircraft through civilian channels that we may hope to build up a proper volume of business over a period of years.

"In short, I believe we can and must arrange for a purchase of this patent on the part of the Government at a reasonable figure before we can hope to develop a quantity manufacture of aircraft."

A special meeting of the executive committee was held February 1, at which the chairman presented the complete record of the patent question to date for the action of the committee.

The committee discussed the advisability of recommending legislation to authorize the purchase and condemnation of such patents as may be considered necessary to the manufacture and development of aircraft.

Another special meeting was held on February 3, 1917, at which Messrs. E. F. Hagar and Frederick P. Fish, president and counsel, respectively, of the Wright-Martin Aircraft Corporation, were present on invitation.

The chairman stated that this special meeting had been called to obtain the views of the Wright-Martin Aircraft Corporation in relation to the Wright patents, and, if possible, reach some understanding that would encourage development in the industry.

At this meeting it developed that Mr. Wright has no interest whatever in the Wright-Martin Aircraft Corporation, having been paid a little more than a million dollars in cash for his patent; that this patent was used as a basis for interesting capital in the new company, in the belief that it was basic and fundamental.

The Wright representatives stated that they believed the required license fee of \$10,000 a year was equitable, and that any manufacturer who could not afford to pay it was not in a position to help in the development of the industry along scientific lines, and that, in other words, the manufacturer with a limited amount of capital invested in his business could not possibly make airplanes successfully in the present advancing state of the art.

They explained the position taken by their company and reviewed the history of its formation. They stated that their basic idea was to develop an aeronautic engine superior to any other in existence, and that to this end they were expending large sums of money in a scientific study of the problems involved, at a total of approximately half a million dollars monthly for all purposes, and were endeavoring to gather into their organization the best available talent.

After three hours' discussion, during which the position of the Government was clearly explained by the committee, the representatives of the Wright company expressed a willingness to cooperate with the Government in any way that would promote the development of the industry, and stated that they desired to clear the industry of fear of patent litigation.

Various suggestions were discussed as to the terms under which this cooperation could be effected.

A special meeting was held on the following day, Sunday, February 4, 1917, at the residence of the chairman, at which the steps thus far taken were reviewed and discussed.

As a result of careful deliberation, a letter to the President was prepared and transmitted under date of February 5, 1917. With this letter the chairman inclosed copies of the letters of the War and Navy Departments previously referred to; a copy of the letter of the Wight-Martin Aircraft Corporation of December 18, 1916, together with the application for license and form of agreement; and extracts from letters received from six aircraft manufacturers in the United States expressing their views of the situation.

This letter contained a brief review of the situation and a recommendation that legislation be approved in the form of an amendment to either the military or naval bill authorizing the Secretary of War to secure by purchase, condemnation, donation, or otherwise, such basic patent or patents as he may consider necessary to the manufacture and development of aircraft in the United States and its dependencies for governmental and civil purposes, under such regulations as the Secretary of War may prescribe.

After approval by the President, the recommendations of the committee were transmitted by the Secretary of the Navy to the chairman of the House Naval Affairs Committee.

On February 20, 1917, letters were addressed to the larger aircraft and engine manufacturers requesting the submission of lists of all patents owned or controlled by them which pertain to aircraft or parts of aircraft.

A meeting of the subcommittee on governmental relations was held on February 24, at which Messrs. Walcott, Stratton, Squier, Marvin, and Coffin were present; also, Mr. John P. Tarbox, patent attorney for the Curtiss Aeroplane & Motor Corporation. The purpose of the meeting was to ascertain the number and nature of the aeronautic patents owned or controlled by the Curtiss Co. From the data exhibited by Mr. Tarbox it appeared to the committee that the patent situation in the aeronautic industry was relatively simple as compared with that formerly existing in the automobile industry; that the Curtiss Co. owned a comparatively large number of patents; that the Wright-Martin Aircraft Corporation owned a possibly basic patent; and that there were but very few other scattering patents, none of which was of great importance.

Mr. Tarbox stated that Mr. G. C. Loening, of the Sturtevant Aeroplane Co., has a patent on a bridge-type landing gear, but that it is not of a controlling nature. He stated that he knew of no patents other than those owned by the Curtiss and Wright companies that might be considered basic. He stated that the Curtiss Co. had two controlling patents at present and expected to have a third in the near future. The first one (No. 1203550) covers a hydrosoplane as regards longitudinal balance; the second patent, known as the "flying boat" patent, covers the relation of the position of the hull step to the center of pressure, the center of gravity, and the center of thrust; and the third patent will cover the single, central, mail float type, with two side floats. He stated that Mr. Curtiss has had no idea of demanding royalties from other manufacturers under existing conditions or of using his patents against competitors; that his purpose in obtaining patents was to fortify and defend himself in any patent litigation that might be started by others.

The naval appropriation act of 1918 contained the following provisions under the appropriation "Aviation":

"To enable the Secretary of War and the Secretary of the Navy to secure by purchase, condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States and its dependencies, for governmental and civil purposes, under such regulations as the Secretary of War and the Secretary of the Navy may prescribe, \$1,000,000.

"*Provided*, That such arrangements may be made in relation to the purchase of any basic patent connected with the manufacture and development of aircraft in the United States as in the judgment of the Secretary of War and the Secretary of the Navy will be of the greatest advantage to the Government and to the development of the industry.

"*Provided further*, That in the event there shall be pending in court litigation involving the validity of said patent or patents, bond, with good and approved security in an amount sufficient to indemnify the United States, shall be required, payable to the United States, conditioned to repay to the United States the amount paid for said patent or patents in the event said patent or patents are finally adjudged invalid."

In letters dated March 10, 1917, the attention of the Secretary of War and the Secretary of the Navy was invited to the foregoing provision in the naval act, and the committee stated that it hoped to effect such arrangements for the solution of the patent question without the necessity of purchasing or condemning any patents.

On March 22, 1917, the subcommittee on patents held a meeting, at which a suggested plan for the solution of the patent question was adopted. The committee then called in representatives of the Wright-Martin and Curtiss companies and the Aircraft Manufacturers' Association and submitted for discussion the terms of the suggested agreement, which, it was pointed out, were merely suggestions.

On March 23, 1917, the subcommittee on patents submitted the following report reviewing the steps taken up to date and suggesting a plan for the solution of the patent question:

"On March 2, 1917, Congress appropriated \$1,000,000 'to enable the Secretary of War and the Secretary of the Navy to secure by purchase, condemnation, donation, or otherwise such basic patent or patents as they may consider necessary to the manufacture and development of aircraft in the United States for governmental and civil purposes.' This action was taken on account of the general belief that the needed expansion of the aircraft industry, calling for the investment of large sums of money, was being very seriously impeded by threatened lawsuits and the demand for the payment of what was looked upon as excessive royalties under certain important aeronautical patents. One such demand upon the manufacturers called for a royalty of 5 per cent on the price of the complete plane with motor and a minimum annual payment of \$10,000 per manufacturer.

"All makers in bidding for Government business were obliged to add to their bids an extra amount representing the royalty they would have to pay under this one patent alone, and the Army and Navy were confronted with many bids in which the contingent royalty amounted to over \$1,000 per aeroplane.

"The National Advisory Committee for Aeronautics, in whose hands the problem was placed for recommendation, realized that it would be undesirable to use the fund provided for the purchase of patents until every means had been exhausted to secure a settlement on a reasonable basis between the different parties in interest. It realized that even in our present need it would be unwise to condemn a patent except as a last resort. The National Advisory Committee for Aeronautics is particularly anxious to encourage invention along aeronautical lines instead of discouraging it.

"In reviewing the records of the Army and Navy Departments as to planes purchased during the eight years prior to our recent heavy appropriations for aerial defense, it was brought out that four men in four different factories supplied all of those planes and apparently contributed most in the development and reduction to practice of the aviation art. Those named in the order of their appearance on the records are Wright, Curtiss, Burgess, and Martin. By a strange coincidence, Curtiss and Burgess joined hands and later the Wright and Martin interests came together.

"While there are other aircraft patents, it was found that these two combinations owned and controlled what might be considered the two dominating groups of patents.

"The national advisory committee has therefore been influenced to a slight extent in its consideration of the patent question by the moral obligation that should be added to the patent rights of these two groups. Recognition of the two groups of patents by the later industry and by the Government becomes automatically recognition of practically all of the actual reduction of the art to practice by Wright, Curtiss, Burgess, and Martin.

"Numerous meetings were held in New York, Buffalo, and Washington in an endeavor to arrive at a basis of settlement that would comprehend all of the patents owned or controlled by each group that would be a fair recognition of their patent rights and that would at the same time cement together and strengthen the industry.

"The plan finally agreed upon by the committee and submitted to the two companies for their consideration and early report is framed upon the following basis:

"First. That it is desirable to avoid the delays and expense necessary to adjudicate all of the patents in question.

"Second. That it is not within the province of this committee to attempt to determine the value of one patent against another or the validity of any patent.

"Third. That it is desirable at once to arrive at some fair basis for the recognition of the patents of both parties that will clear up this matter and permit the more rapid expansion of the industry.

"Fourth. That the relative contributions to the establishment of the aircraft industry as between Wright and Martin on the one hand and Curtiss and Burgess on the other hand may be paid to offset each other, and that the recognition of each should be in the same total amount.

"Fifth. That by reason of Curtiss's patents running approximately three times as long as Wright's, the royalty to the Curtiss-Burgess group might be made about one-third of the amount per plane to be allowed to the Wright-Martin group.

"Sixth. That instead of endeavoring to establish a difference as between an airplane, seaplane, or flying boat, the royalty should be spread uniformly upon all three types.

"Seventh. That the royalty should be a flat rate on each plane, with or without engine, instead of a percentage of cost or selling price.

"Eighth. That royalty should commence upon all planes manufactured and sold after March 2, 1917, and that those manufactured and sold prior to that date be exempted from royalty.

"In submitting this plan the National Advisory Committee for Aeronautics have not attempted to draw up a finished legally approved agreement, but instead to present its plan in the simplest possible form.

PROPOSED PLAN.

"First. That all airplane manufacturers as members of the Aircraft Manufacturers' Association join in a cross-licensing agreement as of March 2, 1917.

"Second. That this agreement cover all patents now owned or controlled by or which may later be owned or controlled by the Aircraft Manufacturers' Association or any of its members; the terms of the cross-licensing agreement to be in general based upon the similar agreement existing in the National Automobile Chamber of Commerce known as the cross-licensing agreement.

"Third. That each member pay into the treasury of the Aircraft Manufacturers' Association the sum of \$200 for each airplane manufactured and sold (with or without engine) by that member, these payments to be made quarterly, and to continue subject to the conditions hereinafter provided.

"Fourth. That the funds thus collected be disposed as follows:

"At each quarterly period for each airplane manufactured and sold during the preceding quarter there shall be paid \$135 to the Wright-Martin Aircraft Corporation, \$40 to the Curtiss Aeroplane & Motor Corporation, and \$25 to the treasury of the Aircraft Manufacturers' Association, to cover its operating expenses and to create a fund for further development.

"Fifth. Payment to the Wright-Martin Aircraft Corporation shall cease May 22, 1923, and payment to the Curtiss Aeroplane & Motor Corporation shall cease at such time as the total amount paid to them shall equal the amount paid to the Wright-Martin Aircraft Corporation, but in any event shall cease October 30, 1933.

"Sixth. After May 22, 1923, the amount paid per airplane by each manufacturer shall be reduced by the amount of the Wright-Martin royalty which will have ceased on that date, and shall thereafter be \$65 per airplane manufactured and sold during such remaining period as payments of royalty are made to the Curtiss Aeroplane & Motor Corporation, as above provided for.

"Seventh. An airplane as herein mentioned shall be understood to mean any form of heavier-than-air craft using wing surfaces for sustentation, stabilizing surfaces, rudders for steering, and power plant for propulsion through the air, whether operated from land or water."

On the same date copies of the report of the subcommittee on patents were sent to the Secretaries of War and the Navy, the Wright and Curtiss companies, and the Aircraft Manufacturers' Association.

At a meeting of the subcommittee on patents on April 24, 1917, it was recorded as the sense of the meeting that the Aircraft Manufacturers' Association should undertake the negotiations necessary to effecting a cross-licensing agreement, and that this committee is willing at the present time to assist in an advisory capacity only, and the Aircraft Manufacturers' Association was so advised.

After the appointment of Messrs. Crisp and Fish as members of the subcommittee on patents efforts were made to bring these gentlemen together in conference to work out the details of the suggested agreement.

No action having been taken by the Aircraft Manufacturer's Association or the respective interested parties, the executive committee, on June 14, authorized the patents committee to take whatever steps appeared necessary to effect a solution of the question, and recommended that in the matter of royalties to be paid to the Wright and Curtiss companies a reasonable maximum be agreed to, not to exceed \$2,000,000 to each company.

At the meeting of the executive committee on June 14, 1917, there were present Messrs. Walcott, Stratton, Durand, Marvin, Squier, Taylor, Towers, Richardson, Foullois, Waldon, Coffin, and others.

After presentation of the report of the patents committee and discussion of the question, on motion duly seconded and carried it was—

"Resolved, That the patents committee be authorized to take whatever steps appear necessary to effect a solution of the patent question, and that the executive committee recommend that in the matter of royalties to be paid the Wright and

Curtiss companies a reasonable maximum be agreed to, not to exceed \$2,000,000 to each company, and further, that the patents committee be instructed to hold a meeting on Monday, June 18, to consider this question to which representatives of the Wright and Curtiss companies and of the Aircraft Manufacturers' Association should be invited."

The subcommittee on patents accordingly held a meeting on June 18, at which representatives of the Wright and Curtiss companies and of the Aircraft Manufacturers' Association were present.

At this meeting the provisions of the plan suggested on March 23, 1917, were taken as the basis for discussion and all phases of the general proposition were canvassed.

The members of the patents committee withdrew for an executive session, at which after deliberation and on motion duly seconded and unanimously carried the following report was adopted:

"It is recommended that the 'proposed plan' for the solution of the patent situation between the Wright-Martin and Curtiss-Burgess groups, as submitted in the report of the patents committee dated March 23, 1917, be followed out in all essentials with the following exceptions:

"a. It is recommended that the agreement be not made retroactive to March 2, 1917, but be made to take effect July 1, 1917.

"b. That in no case shall there be more than \$2,000,000 paid to either the Wright-Martin or the Curtiss-Burgess groups."

The above report was presented to the manufacturers, and it was accepted without reservation by the Curtiss Co. and by the Wright Co., with a reservation as to sub-licensing the Hispano-Suiza engine.

The committee discussed the subject of compensation to aircraft manufacturers for the placing by the Government with other manufacturers the plans, specifications, heat treatments, factory methods, etc., of any manufacturer's design of airplane.

After discussion and deliberation, it was recorded as the sense of the meeting that separate agreement from the proposed cross-licensing agreement should be arranged for by the Aircraft Manufacturers' Association covering the use by any one manufacturer of the designs of another manufacturer at the request of the Government.

That the amount of such compensation between manufacturers should be 1 per cent of the price of the airplane, exclusive of engine, to be paid by the manufacturer ordered by the Government to produce an airplane designed and developed by some other manufacturer to the manufacturer who had so designed and developed it.

That in no case should there be paid to any one manufacturer a sum totaling more than \$50,000 for the designs, specifications, heat treatments, and other factory methods upon any one type of airplane.

The object of each manufacturer in maintaining a laboratory is to develop designs satisfactory to the Government that will enable him to obtain the maximum capacity of his factory in Government business.

The object of the above plan is to encourage development to the greatest degree and to provide a simple working basis whereby the manufacturer successful in producing a type of airplane so satisfactory to the Government that his own facilities are insufficient to meet the Government's needs will receive compensation in a moderate amount per airplane upon such airplanes as are made under Government order by other manufacturers.

It was further suggested that this same basis be used where developed designs of engine are introduced into other factories than the ones that designed and developed them.

The meeting adjourned with the understanding that Mr. Crisp would prepare a form of agreement after further discussion. The minutes of the meeting were sent to all parties in attendance.

The subcommittee on patents met on July 10 to consider the terms of the draft of proposed cross-license agreement as prepared by Mr. Crisp, after consultation with Mr. Fish and the latter's business partner, Mr. Neavo, and Messrs. Houston, Tarbox, Flint, and Russell.

This meeting was attended by officers and members of the Aircraft Manufacturers' Association and representatives of the Wright and Curtiss companies. Mr. Crisp submitted a draft of the proposed cross-license agreement and explained that the plan as originally proposed by the Patents Committee had been modified in the following important particulars:

First. All reference to engines and engine accessories was omitted, for the reason that the principal engine patent—Hispano-Suiza—could not be included in the agreement because of restrictions in the special contract between the Wright-Martin Aircraft Corporation and the owners of the patent, and for the further reason that engine patents in common use in this country were not considered basic.

Second. That after \$2,000,000 had been paid to the Wright-Martin company the subscribers to the agreement would continue to pay \$200 per airplane, and that payments of the balance then due the Curtiss company would be made at the rate of \$175 per airplane—this with a view to clearing up the situation as quickly as possible.

Third. That the agreement contemplates additional consideration to a party or parties who may develop hereafter an airplane or engine or any device of special importance capable of use in an airplane, which would also include, first, a new basic type of airplane; second, one which involves a great improvement on the principles existing in the industry; and, third, an airplane radical in its departure from existing types.

The provisions of the proposed agreement were generally discussed.

By resolution of the meeting the chairman appointed a committee of five on requirements for membership in the Aircraft Manufacturers' Association, with instructions to give careful attention to the legal phases of limitation of stock ownership in such a corporation.

The committee, as appointed by the chairman, consisted of Messrs. Crisp (chairman), Harris, Mingle, Russell, and Houston. After an executive session the committee on qualifications for membership submitted the following report, which was adopted:

"A stockholder of this corporation shall be a responsible manufacturer of airplanes, airplane engines or parts, and accessories used in airplanes; a responsible manufacturer who intends to become a bona fide producer of airplanes or airplane engines, parts, or accessories; or a manufacturer to whom the Government has given a contract for the construction of 10 or more complete airplanes or airplane engines, but no stockholder herein shall acquire or own more than one share of the stock of said corporation."

By resolution adopted by a divided vote it was recorded as the sense of the meeting that engines should be included in the terms of the cross-license agreement. This necessitated redrafting the cross-license agreement, and there being no objection, the chairman appointed a special committee for this purpose, consisting of Messrs. Crisp (chairman), Tarbox, Houston, Mingle, and Russell.

The subcommittee on patents held another meeting July 12, 1917, immediately preceding the regular monthly meeting of the executive committee. The chairman reported that an informal session of the subcommittee on patents on the preceding evening, at which Messrs. Durand, Crisp, Waldon, Towers, Tarbox, Houston, and Harris were present, the various features of the proposed cross-license agreement were discussed. Mr. Crisp laid before the committee a draft of the proposed cross-license agreement prepared in accordance with the recommendation of the conference on the preceding evening.

The chairman reported that an attempt to include the cross licensing of engines under the terms of the cross-license agreement, as recommended by the conference held on July 10, developed many difficulties of a practical nature, especially in regard to the proper payments for the support of the proposed organization as between the engine manufacturers and plane manufacturers. He reported that it had also been suggested at the conference on July 11 that the advantages of cross licensing of engines might better be realized through necessary modifications in the existing cross-license agreement covering the automobile industry. He reported further that as a result of these considerations members of the committee present at the conference on July 11 took action recommending the omission of engines from the terms of the cross-license agreement and instructed Mr. Crisp and his associates to prepare the final draft of the cross-license agreement in accordance with this recommendation.

After consideration of this recommendation of the conference on July 11 and after further consideration of all factors bearing upon the question the proposed draft of cross-license agreement as submitted by Mr. Crisp was, on motion duly seconded, unanimously approved and recommended to the executive committee for its approval.

At the meeting of the executive committee on July 12 the subcommittee on patents submitted the approval draft of cross-license agreement, which the chairman stated in its general terms and details had already received the informal approval of the aircraft manufacturers, and this he submitted as the report of the subcommittee on patents with a recommendation for its approval by the executive committee.

On motion, duly seconded and carried, it was

"Resolved, That the report of the Patents Committee on the proposed cross-license agreement be approved."

Under date of July 27 the chairman addressed letters to the Secretary of War and the Secretary of the Navy reporting the solution of the patent question and inclosing a copy of the cross-license agreement which had been accepted by the aircraft manufacturers and signed by them as members of a new "Manufacturers' Aircraft Association."

On the same date the chairman addressed a letter to the president of the Manufacturers' Aircraft Association recommending the acceptance of the cross-license agreement by the association and its members and that aircraft manufacturers generally be invited to subscribe to same in the interests of harmony and efficiency and to the end that the industry may be enabled to expand freely in order to meet the demands of the Government for the quantity production of aircraft.

The subcommittee on patents was discharged on August 7, 1917.

THE WORK OF THE SUBCOMMITTEES.

Following is an outline of the general work of the various subcommittees during the past year:

Aerial mail service: The subcommittee on aerial mail service was authorized by the executive committee at the meeting on December 7, 1916, for the purpose of cooperating with the Post Office Department in accordance with the request of the Second Assistant Postmaster General. The committee as originally organized consisted of Messrs. Squier (chairman), Marvin, and Stratton, and on March 30, 1917, Messrs. Clark and Towers were added.

The committee held a meeting on January 9, 1917, at which a representative of the Post Office Department was present. A plan of cooperation was formulated and means of overcoming difficulties confronting the Post Office Department were discussed. The committee advised the Post Office Department that in its opinion it would be impractical at that time to place a contract for aerial mail service, and that therefore the Post Office Department should take the initiative and establish such service within its own organization, and that the first experimental route should be selected with a view to inaugurating the service under as favorable conditions as possible. The committee suggested that the first experimental route should be between Washington and Philadelphia or Washington and New York.

STATE OF NEW YORK,
SECRETARY OF STATE'S OFFICE,
Albany, April 12, 1918.

HON. GEORGE E. CHAMBERLAIN,
Chairman Committee on Military Affairs,
United States Senate, Washington, D. C.

DEAR SIR: Replying to yours of the 10th instant, you are informed that the following is a list of the incorporators of the Manufacturers' Aircraft Association (Inc.), incorporated July 18, 1917; location, Manhattan; Joseph S. Ames, Baltimore, Md.; W. Benton Cusper, New York City, N. Y.; Albert H. Flint, New York City, N. Y.; George H. Houston, New York City, N. Y.; John P. Tarbox, Buffalo, N. Y.

Respectfully, yours,

FRANCIS M. HUGO,
Secretary of State.

DEPARTMENT OF JUSTICE,
Washington, D. C., April 11, 1918.

HON. C. S. THOMAS,
United States Senate, Washington, D. C.

DEAR SENATOR: Referring to your letter of the 10th instant, there is inclosed herewith a copy of the opinion rendered by the Attorney General on October 6, 1917, to the Secretary of War relative to the legal status of the Manufacturers' Aircraft Association, and involving in particular the question whether the cross-license agreement entered into between that corporation and its subscribers is in any way in contravention of the antitrust laws.

Respectfully,

G. CARROLL TODD,
Assistant to the Attorney General.

(For the Attorney General.)
OCTOBER 6, 1917.

The honorable the SECRETARY OF WAR.

SIR: I have the honor to acknowledge the receipt of your letter of September 17, 1917, in which you ask for my opinion concerning the legal status of the Manufacturers' Aircraft Association, incorporated under the laws of the State of New York, and in particular whether the cross-license agreement entered into between that corporation and its subscribers (stockholders) is in any way in contravention of the antitrust statutes of the United States.

You submitted with your letter a copy of the cross-license agreement and a digest of certain of the minutes of the National Advisory Committee for Aeronautics (hereafter referred to as Advisory Committee) relating to the subject. The other papers and information necessary for determination of the questions involved were not immediately available, but have since been furnished by that committee at various dates from September 19 to 28.

The Manufacturers' Aircraft Association (Inc.) (hereafter referred to as Association (Inc.)), was formed and the cross-license agreement entered into under the following circumstances, as gathered from the data submitted:

The principal patents in the airplane industry were controlled by the Wright-Martin Aircraft Corporation and the Curtiss Aeroplane & Motor Corporation. The former, controlling what it claimed to be a basic patent, was demanding high royalties from all other aircraft manufacturers. The latter, controlling numerous important patents, was likewise making demands for royalties upon the other aircraft manufacturers. The patents controlled by these companies were of such a character as to make it difficult for any aircraft manufacturer to construct any modern approved form of airplane without infringing one or more alleged patents of each of these companies. The result of these patent claims was not only to render the cost of airplanes to the Government excessive, but also to make it difficult for the Government to get its orders filled, because some of the airplane manufacturers, in view of impending patent litigation, were unwilling to make further expenditures upon their plants.

Confronted with this serious crisis, the War Department and the Navy Department requested the Advisory Committee to investigate the situation and to suggest a solution for the unsatisfactory conditions existing in the airplane industry. Acting in accordance with these requests, the Advisory Committee proceeded to make a careful study of the situation, and after several months of investigation and numerous conferences with all interests directly involved recommended the formation of an association of aircraft manufacturers with a form of cross-license agreement.

Pursuant to the recommendation of that committee, the Association (Inc.) was formed and the cross-license agreement now under consideration was entered into.

Practically all of the manufacturers of airplanes have since become stockholders in the Association (Inc.) and parties to the cross-license agreement. The royalties to be paid under the cross-license agreement in respect to the patents of both the Wright-Martin and Curtiss corporations are materially lower than those previously demanded by the Wright-Martin Corporation alone. The arrangement will result in a substantial saving to the Government.

You state in your letter:

"In accordance with the arrangement thus developed, the War Department now desires to proceed with the placing of contracts for airplanes with airplane manufacturers thus organized."

The Federal antitrust laws prohibit every combination and agreement that produces or tends to produce a monopoly in the interstate and foreign commerce of the United States or that is otherwise unduly restrictive of competitive conditions in such commerce. Their fundamental purpose is to prevent undue interference with the free play of competition without prohibiting normal and usual contracts and agreements entered into for the purpose of promoting the legitimate interests of the trader or of the industry in which he is engaged. The questions here involved must be determined in the light of this fundamental purpose of the antitrust laws.

In considering the questions submitted I have examined the cross-license agreement, the articles of incorporation, the by-laws, and the voting-trust agreement of the Association (Inc.), together with other data relating to that association furnished by the advisory committee. I have also examined and considered the criticisms of the arrangement in the "protest of the Aeronautical Society of America against the formation under Government auspices of an aircraft trust."

The cross-license agreement between the Association (Inc.), and such persons (hereinafter called subscribers) as shall become stockholders therein was entered into on July 24, 1917. (Cross-license agreement, p. 1.) The subscribers under that agreement agree:

To grant to each other licenses under all airplane patents of the United States (with unimportant exceptions) now or hereafter owned or controlled by them. (Cross-license agreement, Art. II, p. 2.)

To appoint the Association (Inc.) their agent with full power to grant the non-exclusive licenses provided for in the agreement in the form attached thereto. (Art. III, pp. 3, 15.)

Not to contract for rights under any airplane patents in such a way as to prevent the owner from granting similar rights to other subscribers on the same terms, unless the subscribers at the same time obtains the further privilege of itself granting right

under the patent, which of itself shall have the effect of bringing the rights acquired by the subscribers under the operation of the cross-license agreement. (Art. III, pp. 3-4.)

Not to enter into any agreement in respect to the subscriber's privileges under any airplane patent in such a way as to restrict the operation of the cross-license agreement in respect thereto. (Art. IV, p. 4.)

Not to grant licenses under airplane patents to others than subscribers upon other terms of royalty than those provided for in the agreement in the case of subscribers. (Art. IV, p. 4.)

To submit claims or compensation in respect to airplane patents or patent rights hereafter acquired to a board of arbitrators, consisting of one member appointed by the board of directors of the Association (Inc.), another by the subscriber making the claim, and a third by the other two, who shall determine the total amount of compensation, if any, to be paid for the same, and the rate of royalty to be paid toward such compensation by any subscriber desiring to take a license under such patent. (Art. V, pp. 4-5.)

To waive all claims as against each other for infringements prior to July 1, 1917 (Art. XIV, p. 13); to make various reports and to keep various accounts, etc.

To pay to the Association (Inc.) specified amounts upon every airplane manufactured and sold by the subscriber until the expiration of specified patents controlled by the Wright-Martin and Curtiss Corporations, or until each of those corporations shall have received the aggregate sum of \$2,000,000, and to make other payments of minor importance. (Art. VIII, pp. 8-9.)

The Association (Inc.) agrees:

To accept the appointment as agent of its subscribers for granting and enforcing the license provided for in the agreement, and for enforcing the other obligations of the subscribers under the agreement. (Art. II, p. 3.)

To make specified payments to the Wright-Martin and Curtiss corporations until the expiration of designated patents or until each of those corporations shall have received the aggregate sum of \$2,000,000, and to pay to the other subscribers the royalties, if any, to which they are entitled under the cross-license agreement. (Art. IX, pp. 9-10.)

The cross-license agreement, as appears from its principal provisions summarized above, makes available to each subscriber of the Association (Inc.) the patents of all the other subscribers, and thus in this important respect instead of restraining trade facilitates competition among the subscribers of that association.

To thus make the patents of each available to all it was, of course, necessary to provide special compensation for those controlling the more important patents in the industry. This, as appears from the data submitted by the advisory committee, was the reason for the special payments to the Wright-Martin and Curtiss corporations.

The provision requiring these payments to be made to these corporations upon every airplane manufactured and sold by the subscribers at first sight seems objectionable as possibly designed to extend the patent rights of these corporations to objects not covered by their patents.

However, the circumstances which led to the negotiation of the cross-license agreement refute this. The numerous patents controlled by the Wright-Martin and Curtiss corporations made it difficult for a manufacturer to construct an up-to-date airplane without infringing one or more of the alleged patents of each of these corporations.

For this reason the advisory committee deemed it advisable to provide for a fixed payment to be made to these corporations in respect to every airplane manufactured and thus avoid the controversies which would almost inevitably arise if the payments were made dependent upon the delicate question of which and how many of the patents of the Wright-Martin and Curtiss corporations had been used in the manufacture of a particular airplane.

The provision requiring subscribers to submit claims for compensation in respect to patents subsequently acquired by them to a board of arbitrators, and to license each other under such patents at the rates of royalty fixed by that board might possibly be used to secure valuable inventions at unreasonable compensation. But it serves the purpose of keeping the patents of each of the subscribers open to all, and that doubtless was the purpose for which it was adopted. Its possible abuse, therefore, scarcely justifies its condemnation in the absence of such abuse.

Not to go into further detail, the provisions of the cross-license agreement seem to me to be reasonably adapted to secure cooperation among the parties to the agreement in the interchange of their patent privileges without imposing by their necessary effect any undue restriction of competition in violation of the Federal anti-trust laws, but rather rendering competition freer by giving every responsible manufacturer of aircraft access to all the inventions in that field.

The by-laws of the Association (Inc.) authorizes any responsible manufacturer or prospective manufacturer of airplanes, or any manufacturer to whom the United States has given a contract for the construction of 10 or more airplanes, or any owner of United States patents relating to the same, to become a party to the cross-license agreement upon subscribing for a share of the stock of that association and signing the voting-trust agreement provided for in the by-laws.

The certificate of incorporation of the Association (Inc.) limits the stock of that association to 100 shares of no nominal or par value, and authorizes it to issue and sell the same from time to time at their fair market value. The subscription value of this stock has since been fixed by the Association (Inc.) at \$1,000 per share. The Association (Inc.) under its certificate of incorporation enjoys broad powers not material to the validity of the arrangement here under consideration.

The limitation of the number of shares of capital stock to 100, taken in connection with other provisions of the by-laws and cross-license agreement, has the effect of limiting the number of aircraft manufacturers who may become parties to the cross-license agreement to 100. In the expansion of the industry this limitation may prove objectionable, but the advisory committee informs me that that number is far beyond the probable number of such manufacturers in the near future.

The voting-trust agreement, in effect, gives the management of the Association (Inc.) for a period of five years to three voting trustees, to wit, a representative of the Wright-Martin and Curtiss Corporations, a representative of the smaller manufacturers, and a member of the advisory committee.

The most questionable provision in the entire arrangement is that requiring the aircraft manufacturers who become stockholders in the Association (Inc.) and parties to the cross license agreement to sign the voting-trust agreement. This provision, however, in view of the circumstances noted below, does not, in my opinion, constitute a restraint of trade in violation of the Federal antitrust laws.

The primary functions of the Association (Inc.), so far as material to the arrangement here under consideration, are to act as an agent for the parties to the cross-license agreement in executing prescribed licenses, collecting and distributing royalties, and appointing through its board of directors one of the arbitrators to pass upon the value of patents acquired subsequent to the execution of the cross-license agreement.

Under the arrangement the interests of the Wright-Martin and Curtiss Corporations, as owners of the principal patents and entitled to the bulk of the royalties provided for in the agreement, are somewhat antagonistic to the interests of the smaller manufacturers who have to pay these royalties. If all the manufacturers had been given equal voice in the Association (Inc.), the smaller manufacturers together would have been enabled to control the Association (Inc.), to wit, the agent of the parties on whose responsibility and vigilance the Wright-Martin and Curtiss Corporations are so vitally interested. This conflict of interests accounts for the adoption of the voting-trust agreement under which the Wright-Martin and Curtiss Corporations named one trustee, the smaller manufacturers another trustee, and a party not favorable to either interest, namely, a member of the Advisory Committee, was elected for the third trustee.

Not to go into further detail, it suffices to say that upon the data submitted to me I am of the opinion that the Association (Inc.), as now constituted, and the cross-license agreement under which it is now operated, are not in contravention of the antitrust laws of the United States.

Respectfully,

T. W. GREGORY,
Attorney General.

Mr. LEA. Now, proceed with your objections.

Mr. FAUBER. I want to say that outside of this matter I want to bring up a question that in my attendance here yesterday I saw it was your duty as a Democratic member of the committee to sort of look after the administration side of this question, and now I am perfectly willing to go ahead, but I want to make this protest, that I believe it is the duty of the Republican members to have been present at this meeting and see that the points of this thing are properly brought out. I think that this committee is failing in its duty. Now, I am not questioning your purpose, except that I do criticize very severely the cross-license agreement as per the paper I have filed here entitled "A 'Within the Law' Conspiracy," and

if this committee is actually seeking for information on graft and crime they ought to be on the job.

Mr. LEA. Am I to infer that you mean by that that you are in any way hampered by me?

Mr. FAUBER. I do not think so at all, and I am perfectly willing to go ahead, but I realize your position, that you represent the administration side of the Government, which necessarily I must criticize in this agreement.

Mr. LEA. I have no objection to your doing that at all. I asked some questions in a way trying to sift the merits of your point, but I want you to feel absolutely free to explain in your own way your objections to this agreement, and show the viciousness of it, if it is vicious.

Mr. FAUBER. It keeps me figuring, not being a lawyer, whether I am being led into a one-sided explanation of the thing.

Mr. LEA. Go ahead, and in your own way as briefly as you can set forth your objections, and I will let you make your own statement.

Mr. FAUBER. There is no objection on my part to your asking questions, only I want to register a protest that the committee as a whole should go into this matter, because of its great importance. As I have said here in this printed statement, "I would warn the Members of Congress that an Aircraft Trust or a monopoly imperils the safety of the United States."

Mr. LEA. Have you a pamphlet there, or a document, that sets forth the essential features of your criticism of this agreement? If you have, we will place that in the record.

Mr. FAUBER. I have sent to the committee a copy of this 45-page paper entitled "A 'Within the Law' Conspiracy," which I believe an honest and competent investigation will pronounce treason. Copies of that I will submit to the committee.

Mr. LEA. A 45-page document, of course, will be pretty big for the record, but suppose you place that on file.

Mr. FAUBER. It covers reasons which they ought to go into.

Mr. LEA. Can you not, in your own testimony, succinctly set forth those reasons?

Mr. FAUBER. I do not think that I ought to be compelled to. I think the duty of the committee in a matter as important as this is such that they ought to be glad to hunt out all that, and if they have not the time they ought to provide a board of patent experts or judges on patents to consider these things, because I do not understand this committee is versed in patent law.

Mr. LEA. Well, I do not claim to be. I can not speak for the others. Suppose you wait temporarily. [After a pause.] I will say that I have tried to get in communication with Mr. Frear, but could not do so at this time, and in view of your criticism of the Republican members not being here I want to say that I have to meet the responsibility this morning for a square deal, both to you and the Republican members, and I do not want to go ahead with an examination if there is any criticism of my conduct of it without their being here, because I certainly do not want to put them in an embarrassing position. I have been conducting this examination at the request of Mr. Frear this morning.

Mr. FAUBER. I have a great deal of confidence in you personally.

Mr. LEA. I want you to have any opportunity you desire to pre-

sent this matter to the best advantage, your side of it, and I feel particularly sensitive, as I feel my responsibility for a square deal is much greater than if I were not alone; and the Republican members have had confidence enough in me to trust this examination to me, and I certainly feel responsible for a square deal here. If you do not feel a perfect willingness to go ahead, I want to stop right now.

Mr. FAUBER. When I mentioned that, I only wanted it to go on the record. I do not care to stop. But I think that this printed paper and this other paper ought to go in evidence.

Mr. LEA. Suppose we do this, Mr. Fauber: You leave those two papers with us and I will confer with Mr. Frear about putting them in evidence, and in the meantime, if you choose to do it, I would be glad to have you state in your own way your objections to this cross-license agreement.

Mr. FAUBER. I criticize the agreement. I have criticized the agreement in my paper as authorizing the grafting of the people and the Government out of \$3,000,000 for patents which could have been purchased for \$1,000,000, and for which the money was actually provided. I believe that the price to be paid in royalties for these patents was at a later date cut in half because of my letters and talks to Secretary Daniels and others, although I have no absolute proof of that.

I have here, under date of December 16, 1917, a copy of a letter which I wrote to the Secretary of the Navy, and a similar letter to the Secretary of War, in which I finished up by saying:

My opinion is that the present arrangement respecting aeroplane patents, if carried through, will cost the people of the United States millions upon millions of dollars; and, if the war continues several years, will result in the sacrifice of hundreds of thousands of men.

I believe, as a manufacturer, a man experienced in manufacturing, with a knowledge of the aeronautical industry, that this Aircraft Trust is more than any other thing responsible for the failure to get aircraft into operation in Europe and for the expenditure of such a large amount of money with so little gained. My reasons for that are these: The policy of the Government was such as to shut out practically all competition in the building of aircraft; to shut out practically all competition in the improvement and design of aircraft. It meant that a manufacturer could not bid and make his own price, could not compete in price or in the production of aircraft, because, by the orders of the National Advisory Committee, the business was given to the manufacturers of the aircraft association as per this statement of the Thomas investigation.

I have prepared, under date of January 26, 1918, a paper which I sent to all the members of the National Advisory Committee setting forth the dangers of this Aircraft Trust. This paper is the result of weeks of time spent in its careful preparation, but no attention whatever was paid to it, and because of that I published this pamphlet: "The men who can win the war. Recommends these things ought to be known at the Capital."

Mr. LEA. That is the pamphlet you suggested be in evidence?

Mr. FAUBER. That should be in evidence.

Mr. LEA. I will take up with Mr. Frear the question of putting this pamphlet in evidence. What is the other document?

Mr. FAUBER. This other paper here, "A 'Within the Law' Conspiracy, Part II," and a paper under the heading of "A 'Within the Law' Conspiracy, Part I," which is already filed with your committee, by the way.

In the pamphlet "The Men Who Can Win the War" I pointed out 11 reasons why the cross license agreement should be annulled, and Senator Thomas in his preliminary investigation and address before the Senate on May 9, 1918, thought enough of those articles to incorporate them in the Congressional Record. These reasons have never been answered or disputed.

Mr. LEA. I will be glad to take that up with Mr. Frear and let you know that action is taken about printing them in the record. Would these pamphlets fully set forth your position in the matter if they were in the record, with the information that you have?

Mr. FAUBER. These three papers mentioned would give quite substantially my reasons; but since that time it is possible that I have some other direct evidence which is not incorporated in those pamphlets.

Mr. LEA. If you have any evidence that is not embodied in the pamphlets, could you state that to us at this time?

Mr. FAUBER. In my pamphlet I have spoken of my interview with Dr. Walcott on December 7, 1917, in regard to the cross-license agreement. When the subject was mentioned Dr. Walcott said, "I have washed my hands of the whole business."

Under date of January 24, 1918, Dr. Walcott wrote me, stating:

The cross-license agreement in connection with the manufacture of aircraft was approved by the Secretaries of War and the Navy and submitted to the United States Attorney General, who gave an opinion that it was legal.

I wish to call attention to this statement of Dr. Walcott's, wherein he says that the cross-license agreement was approved by the Secretaries of War and the Navy; but omits to state his own responsibility as being a member of the committee which recommended said cross-license agreement for approval. In that connection I would call attention to the statement of Secretary Daniels, who told me on December 19, 1917, that he did not like the cross-license agreement, that he held it up for two weeks, but being repeatedly urged, signed it. He further stated that he could not know everything and that he had great confidence in the members of the National Advisory Committee, that he would stand by the board—those were his words—meaning that in regard to my request that he recommend to the committee to take up the question of my patents, that he would not do so, and that inasmuch as Dr. Durand, chairman of the National Advisory Committee, had previously told me that the committee could do nothing except by orders of the Secretary of War, I was at the end of my resources so far as appeals to Government authority went.

Mr. LEA. In that connection can you give us the names of the members of the National Advisory Committee?

Mr. FAUBER. I can not. I have the record at home, but, of course, that is easily obtainable.

Mr. LEA. I think that is probably in the record already.

Mr. FAUBER. I think their annual report gives the names of the members of the subcommittee of the National Advisory Committee.

Mr. LEA. That subcommittee is the one that passed upon this matter?

Mr. FAUBER. Yes; that subcommittee was the one composed of the attorneys of the Wright Co., Judge Crisp and Mr. Fish, who was so considerably made members of the advisory committee to pass on my patents and the patents of others.

Mr. LEA. They had been attorneys for the Wright and Curtiss companies, as shown in this letter on page 6735.

Mr. FAUBER. Yes. According to the letter of January 4, 1918, from Chairman Durand, of the National Advisory Committee, the members of the subcommittee on patents were Dr. Charles D. Walcott, chairman; Dr. S. W. Stratton; Dr. W. F. Durand; Lieut. Commander J. H. Towers, United States Navy; Col. S. D. Waldon, of the Signal Corps; Mr. W. Benton Crisp; and Mr. F. P. Fish.

Mr. LEA. Can you state who was the representative of the War Department?

Mr. FAUBER. Then he goes on to say that Rear Admiral D. W. Taylor, United States Navy; Maj. Gen. George O. Squier, United States Army; and Mr. Howard E. Coffin, also attended a majority of the meetings of the committee, and I believe these gentlemen were all members of the National Advisory Committee, with the exception of Mr. Fish and Mr. Crisp, attorneys for the Wright and the Curtiss companies.

Mr. LEA. Mr. Crisp was not a member of the National Advisory Committee?

Mr. FAUBER. No; he was the Curtiss attorney. Crisp was brought into this thing, I believe, because he claimed to have had some connection with drawing the automobile cross-license.

Mr. LEA. That system applied to licensing engines, the automobile cross-license system?

Mr. FAUBER. No; to anything connected with automobiles.

Mr. LEA. Including engines?

Mr. FAUBER. Yes; it might include any patents.

Mr. LEA. Were aeroplane engines included in the cross-license during the war, so far as you know?

Mr. FAUBER. I do not know of any patent that referred to aeroplane engines, but I do not see why it would not include anything in the aeronautical line.

Mr. LEA. This particular agreement in evidence applies only to aeroplanes?

Mr. FAUBER. Yes; but an engine is a part of an aeroplane, a very necessary part.

Mr. LEA. This agreement excepts the engine and its accessories, in section 1.

Mr. FAUBER. I had forgotten that. It has been quite a long time since I read that agreement. I recall now very distinctly that fact, because that provision was undoubtedly put in there to protect the Wright Co., who had purchased the Hispano-Suiza rights. The agreement also excepts the Dunn patents, which belong to the Curtiss Co., as you will recollect.

Mr. LEA. Do you know if there was any separate agreement that covered engines?

Mr. FAUBER. No; I do not.

Mr. LEA. So far as you know they operated during the war without any agreement of this kind concerning engines?

Mr. FAUBER. Yes; as a matter of fact, I do not believe there are any patents of consequence on engines.

Mr. LEA. The situation is somewhat different in reference to engines than what it is to aeroplanes in that respect?

Mr. FAUBER. Yes. Of course the prime object of this cross-license agreement was to control the aircraft industry. This is not any question about that, and because of the fact that the Government had provided the \$1,000,000 to purchase the patents, Mr. Curtiss later came along with the scheme of creating a cross-license agreement and an association and obligated the Government to pay \$4,000,000 for Curtiss patents that could have been purchased outright for \$1,000,000, and that fact shows that.

Mr. LEA. The \$1,000,000 referred to for purchasing patents was in reference to the Wright patents, was it not?

Mr. FAUBER. No; Wright and Curtiss. They had an agreement to pay the Wright and Curtiss companies.

Mr. LEA. This agreement did have the advantage of covering all the patents held by those entering the Manufacturers' Association?

Mr. FAUBER. Yes; but no advantage to the Government, because it shut out invention and independent capital. This agreement is nothing more nor less than a murderous conspiracy, an absolutely treasonable conspiracy in war times.

Mr. LEA. Will you set forth the difficulties of the independent manufacturer created by this agreement?

Mr. FAUBER. Well, contracts were only given to associations who were members of the association. That, as I have repeatedly stated, was proven by the contracts themselves and by the Thomas investigation. I can substantiate that statement by the fact that I went to the War Department myself to get a contract for building aircraft hulls which came under my patent, and I had a company that was willing to make an arrangement with me, and in the course of my investigation I called on Admiral Taylor, whom I know personally, and he gave me a letter to Naval Constructor Coburn, of the Naval Aircraft Factory and told me to go to him. I went down there and saw Mr. Coburn and went through the Naval Aircraft Factory and saw what they were doing, and Mr. Coburn said: "I do not know why the chief sent you down here, because we have planned this factory to turn out hulls, wings, and machines complete with the exception of the motors."

Before going down there and before seeing Admiral Taylor I called on Capt. Irwin, who was, I think, connected with the Signal Corps. As a matter of fact, I was referred to Capt. Irwin by Secretary Daniels, and he said to me, "Why don't you go to the Curtiss Co. or some of those people who have contracts with the Government?" I told him that I objected to the Curtiss Co., I objected to taking a subcontract and letting the Curtiss Co. get all the cream of the profits.

Mr. LEA. There is this feature that I would like to get your answer to in reference to that, the Curtiss people had a limit of \$2,000,000 on the amount they were to receive for their patents, and that was subsequently reduced to \$1,000,000.

Mr. FAUBER. Yes.

Mr. LEA. They would secure that amount if the Government manufactured a half of its program, approximately.

Mr. FAUBER. Yes.

Mr. LEA. Would not their profit be the same as far as their profits were concerned, whether they manufactured for you or not, or whether you manufactured?

Mr. FAUBER. Would their profit be the same?

Mr. LEA. Would not their profit have been the same so far as the amount paid them for these patents was concerned?

Mr. FAUBER. Possibly it might. I do not exactly understand the point of your question.

Mr. LEA. What I was trying to get at was that your position, so far as bringing any profits to the Curtiss Co. is concerned seemed to be not supported by the fact, because they were going to make this profit whether such an agreement was made with you or not. That part of it is true, is it not; it did not affect the amount that they would be paid; but on the other hand your point is also that you would not be adequately compensated for your patents?

Mr. FAUBER. No; because the trust companies had the advantage; they controlled the situation.

Mr. LEA. By arbitration they decided what you were to be paid?

Mr. FAUBER. They had their hulls made outside by competition, but the Government did not have the advantage of that same competition which the Curtiss Co. had. That was a put-up job on the Government. These people got the cost plus system and all sorts of advantages, that included money furnished by the Government. What the Government should have done to encourage the industry would have been to give orders to any company who could manufacture aeroplanes.

Mr. LEA. That involved first determining the type of aeroplane to be manufactured?

Mr. FAUBER. They had to do that anyhow.

Mr. LEA. And in the second place who could manufacture them to the best advantage?

Mr. FAUBER. The Curtiss Co. only had a very limited plant. There were plenty of people, good manufacturers, in the country, men just as able to make machines as the Curtiss people.

Mr. LEA. If a man outside of Curtiss could make them just as well as he could, that man ought to have been given a square deal.

Mr. FAUBER. Yes; he ought to, but he was not in the Aircraft Trust?

Mr. LEA. The Government did not place any contracts with you?

Mr. FAUBER. No; I had the officials from the Philadelphia Navy Yard ask me to go down there and put in a bid and I refused to do that.

Mr. LEA. Did you feel that any injustice was done to you, or the Navy or the Army, but not having any contracts placed with you?

Mr. FAUBER. As a man of practical experience I might have been of considerable advantage to the Government, as many other practical manufacturers could have been if they had had the opportunity.

Mr. LEA. Did you feel that they failed to place any contracts with you because they failed to appreciate the value of your patents, or was it in favor of those other people?

Mr. FAUBER. I say it was in favor of these other people, the Government business was monopolized by the Aircraft Trust.

Mr. LEA. And, was your patent as such, used by the Government; did they claim to adopt your patent in their work?

Mr. FAUBER. Did who claim?

Mr. LEA. The Government.

Mr. FAUBER. They made no pretenses. I had negotiations with Curtiss in the past three months and was offered practically \$200,000 for my patents. Of course he knows he is using my patents.

Mr. LEA. Going back to the matter of taking the testimony to-day, I just talked with Mr. Frear on the telephone, and Mr. Frear told me that I could state that he was very busily engaged getting together data preparatory for this trip the committee is going to make to the West, and it was practically impossible for him to be here this morning, and that was the reason that he requested that I should proceed with this examination, and he did so believing it would be an accommodation to you while you were here to proceed with your testimony.

Mr. FAUBER. I think I ought to have been allowed to proceed, because I was ordered more than two weeks ago to be down here on the 5th day of August, and I was here, and a man was put on ahead of me that I know from his own statement was either ordered or requested to come later than I was, Dr. Christmas. Then yesterday I lost a whole day by somebody else being put in.

Mr. LEA. Mr. Magee, the other member of the committee, is going West with us and has gone to his home in New York to make necessary preparations for taking the trip, and so I feel free to say as the minority member of the committee that it is not through any desire to avoid any responsibility on his part that he was not here this morning, and Mr. Frear suggested that you go ahead and state any points that you have, or any information that you have, that throws light on this question, and he believes that can better be accomplished by your statements than by putting these articles in the record. So I would like to have you go ahead and state the facts in your own way.

Mr. FAUBER. I do not agree with him at all. I do not believe the committee is trying to get at the full data. The committee ought to go into this matter without my spending \$5,000 in preparing—

Mr. LEA. I want to say in justification of the committee that there is a well-known rule of taking testimony, and that is for the witness to state the facts rather than to ask to put printed statements in the record. We want you to have the fullest opportunity to do that.

Mr. FAUBER. I agree with you on that. The other side of the question is the fact that a witness like myself, who is not accustomed to be before committees or accustomed to talk offhand is not likely to make as complete statements as they can write in carefully prepared papers. Therefore, such papers ought to go in the evidence.

Mr. LEA. That is a difficulty that confronts all witnesses on the stand, that by deliberation and time they can make a better statement, but that is not the method of producing testimony ordinarily followed. So I would like to have you go ahead and make your statements.

Mr. FAUBER. I fail to understand that, when the committee has introduced exhibits as in the case of Dr. Christmas, exhibits of practically no importance, and I would like to know why they exclude my exhibits.

Mr. LEA. We introduced statements and agreements made by other witnesses, but when the witness comes on the stand the usual procedure is for the witness to state his testimony instead of reading documents.

Mr. FAUBER. Yes, I know.

Mr. LEA. And we are simply following the usual, and, I believe, the proper course with you as with every other witness.

Mr. FAUBER. I have mailed to this committee within the past week, to Chairman Frear, a copy of a letter which I addressed to Judge Hughes on August 19, 1918. In this letter I furnished Mr. Hughes with what I thought was some evidence connecting the National City Bank with this Aircraft Trust. I was in this bank in the summer of 1917 for the purpose of getting an interview, if possible, with the president, Mr. Vanderlip, and his secretary told me that they had a man down here in Washington to assist Mr. Coffin, and he smiled when he said it. He said the assistant was Mr. Horton.

About the date of this letter, August 19, 1918, Mr. Frederick W. Barker, president of the Aeronautical Society of America, told me that he was personally acquainted with this man Horton, whom the National City Bank had sent down to assist Mr. Coffin, and that he had asked him what was being done at Washington, and he said, "Well, 10 years from now I can tell you more about it; I do not dare tell you now."

I sent this letter to Judge Hughes with the belief that that was important testimony, and I have sent it to this committee with the belief that it is important testimony, and this testimony appeared to be side-tracked, and I simply want to call attention to it now.

Mr. LEA. Were you a witness before the Hughes Committee?

Mr. FAUBER. I was not a witness before the Hughes Committee. I had an interview with Judge Hughes on June 20, 1918, and was requested by Senator Chamberlain to see Judge Hughes, and took a letter of introduction to Judge Hughes, and Judge Hughes agreed to call me, but he did not do it. Furthermore, Judge Hughes did not answer my various letters and papers and acknowledge them, whereas Senator Thomas always did. After writing three letters to Judge Hughes I finally got a general acknowledgement that some papers had been received.

I want to state, further, that Mr. Barker told me that in December, 1916, Mr. Coffin called at his office and at that time had the idea of forming a cross-license organization. In Flying, of August, 1917, page 583, there will be found a statement by Mr. Farrot, publicity man of the Manufacturers Aircraft Association, who says that Mr. Coffin had the idea of a cross-license agreement and took it up with some of the manufacturers at the aeroplane show held February 15, 1917. Further, in that connection, I wish to state that in an interview held with Mr. Glenn H. Curtiss about two months ago—the exact date I have a memorandum of, but have not it with me—Mr. Curtiss said that Mr. Coffin was the first man to show him the advantages of the cross-license agreement and an association. In this connection I believe that Mr. Coffin was holding responsible positions under the Government and at the same time was pushing an organization of aircraft manufacturers which was very detrimental to the Government and which, in my opinion, has cost this Government hundreds of millions of dollars and the sacrifice of the lives of many men.

Mr. LEA. In connection with that statement, that it has cost the Government hundreds of millions of dollars, will you give the specific facts on which you base that conclusion?

Mr. FAUBER. That statement, like the statement as to the lives of how many men it cost, is a matter of opinion in which different experts would vary, and there is no way of proving how much it actually cost. I must admit that, of course; but anyone who is familiar with business knows that if you want a contract made the way to get the price is to get it in competition. This Aircraft Trust not only prevented competition in manufacture, but it prevented competition in invention and the perfecting of aerial apparatus. It shut out the foreign inventions, the inventors and engineers who had had actual experience on the battle field.

Mr. LEA. To summarize, your criticism would be that whatever loss has been sustained has been due to discouraging the participation of those outside of the association?

Mr. FAUBER. They were not only discouraged, they were prevented, because in the first place they could not get Government contracts, and in the second place it was not safe to invest money in patents or the development of inventions because the Aircraft Trust controlled everything.

Mr. LEA. But the Government, if it found any invention that it wanted to use during the war, had a right to go ahead and use it, regardless of that agreement?

Mr. FAUBER. Sure; and they could have done the same with the Wright and Curtiss patents and could have purchased them for \$1,000,000, for which the money was appropriated, and the Government should have done it.

Mr. LEA. Now, please go ahead with your own statement.

Mr. FAUBER. I want to say that I have not prepared any definite line of procedure, so I am in the position of having to work it out as I go along. I was dependent to a certain extent on being prompted.

Mr. LEA. You can refer to your notes to suggest what you want to talk about.

Mr. FAUBER. In the matter of the cross-license agreement, one of the members of the Aeronautical Society, a patent attorney, did testify before Judge Hughes, and I presume the exact testimony is accessible here to your committee; but as near as I can recall what he told me was that he characterized the cross-license agreement as the most outrageous violation of justice he had ever heard of. I will not say those were the exact words, but he used words to that effect to Judge Hughes, and Judge Hughes immediately stopped the investigation and sent for the Attorney General and asked him in, and asked the witness to repeat the statement, and he did repeat the statement, and he said that the Attorney General turned his head and looked out of the window and had no comment to make.

Mr. LEA. Who was that witness?

Mr. FAUBER. Thomas A. Hill, Woolworth Building, New York. Mr. Frederick W. Barker, president of the Aeronautical Society, is also a patent attorney, by the way.

I would call the attention of the committee to a very important pamphlet published by the Aeronautical Society of America, called the Journal of the Aeronautical Society of America, Volume II, September, 1917. Appearing on the first page is the following:

Protest of the Aeronautical Society of America against the formation under Government auspices of an aircraft trust, the stifling of the spirit of invention in America, and the squandering of public money.

This pamphlet was written, as I understand, by Mr. Barker, and Mr. Hill, both patent attorneys, but before they had seen the cross-license agreement. It was obvious to them, as it is to any patent attorney, that an agreement in the nature of a cross-license agreement would not be legal, because the National Advisory Committee as a body had not the authority to pass on these patents; they were not patent attorneys and judges; they were not a court of jurisdiction on patents; but yet the cross-license agreement by its nature makes such patents fundamental in the art whether the patents have any relation to the product which the Government is using or not, so long as they bear the name of an aeroplane patent. Furthermore, the said pamphlet produced a letter from the Assistant Attorney General, G. Carroll Todd, under date of August 16, 1917, which is nearly two months prior to the date of the Attorney General's opinion on the cross-license agreement, in which the Assistant Attorney General says that "No such agreement as you describe has been sanctioned by this department."

This letter and the pamphlet are proof of the fact that the Department of Justice had notice of the nature of the cross-license agreement, and I think this pamphlet ought to be in evidence.

Mr. LEA. Well, of course, it may be that the author of that article should be a witness here and that he rather than his written statement should state his testimony before the committee. Do you not think that agreement is also possibly not lawful for the reason that it is in restraint of trade?

Mr. FAUBER. Yes, I think that is probably true.

Mr. LEA. What do you think of the feature of the agreement which extends its operations for a period of 10 years or more, in some instances longer, after the war is over?

Mr. FAUBER. I have not pretended to analyze the agreement from the standpoint of an attorney as much as I have from a practical standpoint, and the question as to how long the agreement might run has never concerned me very much, because I have always felt that the agreement would be invalidated before it had time to expire.

Mr. LEA. Do you not recognize a great difference in the agreement as a reply to the necessity for quick action in war times and its application under peace conditions?

Mr. FAUBER. I think it shows the agreement was not intended to meet the emergencies of war; it was intended as a monopoly agreement.

Mr. LEA. Assuming the agreement was improper, at any rate, so far as the Government was concerned, they were trying to take advantage of war conditions?

Mr. FAUBER. That is why I claim it was a treasonable conspiracy. The men who put that over ought to be tried for whatever that crime ought to be, if there is a crime, because I believe they are responsible for the lives of many men and for a trust which is a menace to the United States, because here we have had within the past few months a Government commission headed by Assistant Secretary Crowell, accompanied by members of the Aircraft Trust, going to Europe to find out what they can about the aeroplane art.

Mr. LEA. As far as you can, Mr. Fauber, I wish you would give us what you might call specific evidence of the bad operation of this

agreement; the character of the agreement and its interpretation and legal effects are shown by what we have got in evidence from the Congressional Record. If you can, I wish you would show specific facts bearing upon its operation.

Mr. FAUBER. Bearing that in mind, I wish to introduce my testimony with regard to my conversation with Mr. Curtiss, of the Curtiss Aeroplane Co., because it is understood that any inventions are an especial part of a new industry.

Mr. LEA. What is the substance of the conversation you had with him? You can refer to your notes there and make your own statement, if you will.

Mr. FAUBER. The substance of that conversation was that the Curtiss Aeroplane Co. being infringers of my patent, Mr. Curtiss said that he believed that I was entitled to consideration; but he said the trouble was that if under the cross-license agreement his company paid me a substantial sum of money it was like making me a present of so much money, because the cross-license agreement required them to give their rights under the patents without any remuneration. Mr. Curtiss said he was not entirely sure about that, however, and he would consult Mr. Russell, the president of the Manufacturers' Aircraft Association, who is an officer of the Curtiss Co. and who was in the adjoining office. Mr. Russell told him that he was correct. That shows that the agreement operates to prevent inventors or manufacturers owning patents from collecting what is due them on their patents.

Mr. LEA. That was on the assumption that they were using patents to which you had the real right?

Mr. FAUBER. Which he admitted; yes.

Mr. LEA. And he refused to pay you for them?

Mr. FAUBER. That was his reason for not paying us, because under the cross-license agreement he could not collect from the members of the association or reimburse himself for the patents.

Mr. LEA. However, if he violated your patent rights, your remedy would be a suit against them?

Mr. FAUBER. Yes; that remedy I have, but in that connection the inventor has trouble again, because it has developed that the Aircraft Trust seemed to be able to use Government experts and Government prestige to their advantage in litigation before the courts. As a case in point I will refer to the case of Curtiss before Judge Chatfield, of the United States District Court for the Eastern District of New York. In this case I found the Curtiss Co. using a Government expert in the aero-dynamical department of the navy yard at Washington to establish evidence of a technical nature, which I believe is not according to the facts, and I have prepared an analysis of that case, which I have already submitted to Judge Chatfield before whom the case was tried, and if this committee cares to go into it I have a copy for their consideration. That case, as between lawyers and experts, as near as I am competent to judge, is purely a frame-up. Then it goes to show that an inventor is handicapped in fighting the Aircraft Trust, because they can use in a United States court experts of the Government. They have the privilege of sending their experts abroad with the Assistant Secretary of War, and they have all the advantages in the world which an ordinary person or corporation does not have. The other side of this case is on record, and if this committee wants

to consider it all they have to do is to secure the records from Judge Chatfield and put them in the hands of experts for comparison. If I am wrong in my opinion, I am wrong.

Mr. LEA. That, of course, did not involve any contract to which the United States was a party?

Mr. FAUBER. Absolutely not.

Mr. LEA. It would probably be outside of our jurisdiction.

Mr. FAUBER. It was designed to get hold of a patent for strengthening the Aircraft Trust.

Mr. LEA. I see your position in reference to it. Now, if you will look up the next point you have I would like to have you proceed.

Mr. FAUBER. I understand from your committee, then, that you would not care for a copy of my correspondence with the National Advisory Committee and the Manufacturers' Aircraft Association?

Mr. LEA. I would be very glad to have you leave that with us, but not to put it in as evidence and have it printed. We would rather have your own statement of the facts.

Mr. FAUBER. I prefer to leave that elsewhere. That is the only copy I have, and I am certain that in the Hughes and Thomas files you will find a duplicate of this. If not I shall be glad to furnish it if you want it.

Mr. LEA. Well, I think that the one will answer our purpose, but you see it goes back to that same proposition that we want your statement in the record, but this might be useful for reference purposes.

Mr. FAUBER. Yes; it is useful because it shows the attitude of the National Advisory Committee in regard to these patents. It also shows the attitude of the Manufacturers' Aircraft Association to a certain extent.

Mr. LEA. If there is anything in that that you have not covered, suppose you state it now, the substance of it.

Mr. FAUBER. I will call attention to Dr. Durand's statement of October 19, 1917, which is about four months after the date of the cross-license agreement. Dr. Durand says:

It now appears that the Government is not at all likely to purchase any patents whatever, but will, on the contrary, go forward and use such patents as may be desirable in the construction of aircraft, leaving the owners of such patents full right of recovery through the Court of Claims.

I bring in that paragraph of this, as showing the attitude of the National Advisory Committee soon after having given due consideration to the Wright and Curtiss patents, that they were not ready to consider the patents of others. This same letter contains Dr. Durand's statement that his committee had considered the Curtiss patents as fundamental in the hydro-aircraft art, which conclusion I must point out was entirely unwarranted and a decision which they by law not authorized or had not the power to make.

Mr. LEA. In that connection the merit of that contract, if it served a useful purpose, was in determining the extent of liability and avoiding litigation as to liability of the United States for the use of these patents, was it not?

Mr. FAUBER. It might have been that, to some extent. I do not know. I think the United States ought to be subject to liabilities to such inventors as have been damaged.

Mr. LEA. Your understanding is that if it was to accomplish that purpose, it did not meet the end which was intended? Is that true?

Mr. FAUBER. I do not think it did.

Mr. LEA. It only partially covered the uncertainty in that respect. It did not affect patents of independents. It left that still a matter of controversy for future determination?

Mr. FAUBER. Yes.

Mr. LEA. Will you go ahead now in your own way?

Mr. FAUBER. I understand that your committee is going away soon and that there will not be much done for several months.

Mr. LEA. We expect to take testimony on many matters. We are only in the initial stages of this investigation and we wanted to get as complete a statement from you as we could at this time.

Mr. FAUBER. I do not think I have anything more to state now. If you have any further questions to ask I will be glad to answer them. Of course, there are a great many things I might talk on, but we have not the time to cover them, so I do not see that it makes much difference just where we stop.

Mr. LEA. We have obtained the substantial features of your information about this, have we not? Of course, I realize there may be many circumstances or features that tend to throw light on it, but have we not gotten the basic principles involved here?

Mr. FAUBER. You have some of them certainly. I think, perhaps, if you would include my papers you would have practically all I to say, but I can not say from memory whether you have it all or not.

I want to call attention to a copy of my letter sent to the President of the United States under date of May 11, 1918, and a telegram preceding such letter, dated May 7, and I do this because in this letter I have referred to what I believe are grounds for a charge of collusion or conspiracy, what should receive a most impartial investigation, and as this was just prior to the Hughes's Department of Justice investigation, I sent a copy of this letter also to Judge Hughes.

Mr. LEA. In substance, you call the attention of the President at that time to the situation about which you have testified here to-day? Is that correct?

Mr. FAUBER. That is what it amounts to, in general substance.

Mr. LEA. You will receive a copy of your testimony and if there is any specific evidence that you want to call attention to, that you have omitted to-day, I will be glad to have you mention it to me.

(Thereupon at 12.30 o'clock the committee took a recess until 2 o'clock p. m.)

AFTER RECESS.

The subcommittee reconvened at 2 o'clock p. m., pursuant to the taking of recess.

Mr. FREAR. It appearing that one of the members of the subcommittee desires further to cross-examine Gen. Menoher and Gen. Foulois, the chairman makes the following statement:

The Thomas hearings, which covered about three or four months, and the taking of testimony of about 200 witnesses, were conducted by a Senate committee, Senator Thomas and Senator Reed performing practically four-fifths of the examination, so far as the record

shows. The report based on those hearings stated that "a substantial part" of the \$640,000,000 appropriation then made had been wasted and that no fighting or bombing aeroplanes had reached the fighting front at the time of that investigation, and the report was dated August 22, 1918. None ever reached there from this country at any date, according to all testimony.

In those Thomas Senate hearings, no attempt apparently was made to cross-examine witnesses. In the Hughes investigation, conducted during the spring months, Mr. Hughes conducted the entire examination of nearly 300 witnesses, with the Attorney General at hand, and no cross-examination of witnesses or inquiry whatsoever was made by the Attorney General, who was present in person or by assistant at all hearings.

This present investigation seeks to ascertain the truth of the findings in the Hughes and Thomas reports, and to determine what additional matters relating to aircraft are of importance for the Congress to consider. No investigation by congressional committees in recent years has yet been called to the chairman's attention in which cross-examination of witnesses before a committee has followed the general examination of the various witnesses. A difficulty found in carrying on an investigation at this time, wherein requests have been had for the separate examination of possibly several hundred witnesses before the conclusion of hearings raises the question of whether or not the subcommittee can conduct examinations under present methods within a reasonable period of time, so as to report to Congress. At present rate of progress it would take many months, great labor, and large expense to pursue present methods.

Any member of the subcommittee has a right to cross-examine upon any material point if he chooses to do so, the same as in a law proceeding, providing the facts are not clearly developed, and that right will not be gainsaid by any other member of the committee. In the examination of Gen. Patrick, the record shows, as nearly as can be ascertained, that the cross-examination occupied a period of between one and two hours.

In the examination of Dr. Christmas 35 pages of the record are consumed in the cross-examination conducted by a member of the committee. In the examination of Gen. Foulois yesterday considerably over an hour was consumed in cross-examination, and that cross-examination has not yet been concluded.

The chairman wishes to express at this time his absolute confidence in the purposes of every member of the committee and his belief that they are acting within their rights in cross-examining any witness, although the course is unprecedented in congressional hearings. On the other hand, the necessity for securing an end to the hearing compels some other policy be pursued, and it is suggested that the chairman will conduct separate examinations, at which any member of the committee may participate, and a reasonable time be allowed for further examination of any witness; and any member of the committee may continue cross-examination as long as he chooses, but with the understanding that the chairman or any other member of the committee will undertake to examine witnesses as rapidly as possible, in order to present the facts, and complete the record with least practicable delay.

Participation is invited in all such hearings by any member of our committee. In any event, nothing will be done to curb examinations, however extended, excepting that the chairman or other members of the committee will proceed with new examination of such new witnesses as may be available without undue delay. At this time the chairman desires to absolve any other member of the committee from any intent to purposely interfere with or delay the examination, but it is purely a question of policy in reaching an end with witnesses. The investigation, in other words, first conducted by the chairman under the rule, is to be a hearing to ascertain what witnesses know and will testify to briefly, for the benefit of the committee. This is not a trial court for the purpose of persuading a jury. Testimony is desired for information of committee on which to base a report to Congress. With that end in view and for the purpose of examining the large number of witnesses that will be called before the committee before the end of these hearings, it is suggested that this policy be pursued hereafter if necessary to do so.

Mr. LEA. I would like to make a statement in response to the suggestion of the chairman. Manifestly his reference to the cross-examination by another member of the committee referred to my own cross-examination. I do not regard that as any personal reflection upon myself, but I am not in harmony with the suggestion of the chairman.

In the first place, I assumed a responsibility in going upon this committee, as did the other members, and that responsibility is to get at the facts in this case. I shall never be in favor of curtailing the time devoted to this investigation for the mere purpose of saving time. I believe it necessary to exercise the patience and the industry necessary to develop the complete facts in order to have an investigation and arrive at results that will in the end be most satisfactory.

Cross-examination is universally regarded by all persons familiar with investigations and court procedure as the greatest developer of truth known to Anglo-Saxon methods of jurisdiction. It is true. I presume, that in the Hughes investigation Mr. Hughes conducted practically the whole examination. But I call attention to this difference in the situation: The Hughes investigation was strictly a nonpartisan investigation and as free from political influences as an investigation could be. Here we have a bipartisan investigation. Personally, I am inclined to believe that perhaps Congress made a mistake in making it a bipartisan investigation. I think an investigation similar to the Hughes investigation would have been a preferable method of developing the facts and the results that would have been accepted by the country as a correct disclosure. However, I do not wish to be understood as impeaching in any respect the attitude of my fellow members in this committee. Mr. Frear and Mr. Magee have been painstaking; they have been courteous to me; and Mr. Frear has been tireless in his energies. I am casting no reflection, but, without any reflection upon their motives, I believe the bipartisan situation that is presented shows the necessity for a justification of cross-examination.

It is not my purpose to delay the revelation of the truth by this committee for one minute or for one hour, and I only want to use the right of cross-examination so far as in my judgment is necessary to properly develop the facts.

Now, I do not like this system of dividing the hearings, because I think the examination should be conducted when Mr. Frear and myself are both present and both have the opportunity of examination. I should not like to be deprived of that right to be present when Mr. Frear is taking evidence. I do not say that because of any reflection whatever upon Mr. Frear, but I believe, in accordance with the well-known methods of producing evidence and arriving at the facts, what might be called the two conflicting interests should be present. I am willing to try to facilitate the work of this committee in every proper way by limiting cross-examination just as much as I think is consistent with my duty and responsibility, and I deplore the idea of separating the examination of witnesses and depriving members of the committee of the opportunity of jointly hearing the testimony of any witness where it is so desired.

My suggestion to Mr. Frear at this time would be that he proceed by the method we have followed heretofore, temporarily, and in the long run he will not find me a lengthy cross-examiner. In fact, all my record as an attorney in California is to the contrary. I think, perhaps, he will be satisfied to go ahead if he will just be patient a day or two longer.

MR. FREAR. In response let me say that the personal relations of Mr. Lea and myself have been of the pleasantest character for many years when we have been associated on committees together, so there can not be any possible question about that. He fails to recognize, however, the difference between an investigation and a trial in court. The Thomas investigation, which he neglected to speak of, was one in which a majority party practically conducted the examination without suggestion of cross-examination. Their findings were directly in line with the findings that we are investigating to-day. If there was a disposition to delay this investigation, it could readily be done by the plan suggested just now by my colleague.

The record as made will be submitted and placed in the hands of any member of the committee, and any witness will be recalled as often as may be desired for the purpose of reexamination or cross-examination at any time, but the prospect which confronts us now, with two generals in the room, both waiting to be cross-examined by my colleague, Mr. Lea, when the chairman of the committee desires to bring out additional matters with other witnesses, and when we are practically at the conclusion of our examination in Washington, shows the difficulty that will constantly arise unless some other policy is pursued. This is emphasized by the fact that Gen. Foulois was under a cross-examination yesterday of between one and two hours and it is to be continued.

I may repeat that in all my examination of investigations, never before have I been confronted with the fact that cross-examinations are conducted as in a court of justice. Unquestionably a short examination ought to be made by every member of the committee, if necessary, to secure what he believes are any additional facts, if they are not presented in the original examination, but a cross-examination, which, with several witnesses, has reached an hour and a half to two hours in each case, and is at present without end, certainly calls for other methods in the future, if we desire to get at the truth, if we desire to reach one-quarter of the witnesses we are asked to hear. Some means of permitting the chairman, or anyone else connected

with the committee, to carry on examinations must be devised, with the understanding that cross-examination will be permitted at another time, at the conclusion of that examination, or by a member of the committee alone if he so prefers. Whether any member of the committee desires to be present or not does not appear to be material to a development of facts. It is improbable that partisanship will affect our hearings; if so the remedy of cross-examination will remain. The chairman requested his colleague, Mr. Magee, of New York, to conduct the examination of Mr. Christmas yesterday when the chairman was unavoidably detained elsewhere. This morning he made the same request in regard to Mr. Fauber's examination, and that Mr. Lea conduct it. This was without any hesitation or without any doubt of the fairness of the examinations in the hands of either gentleman, and because of other duties connected with the committee which prevented the chairman from being present.

I speak of this because we are confronted with this situation—that if we pursue the policy that has been initiated we will from now on get nowhere, so far as reaching an intelligent investigation is concerned without an enormous amount of time being consumed and at large expense. I would not for a moment question the right of any member of the committee to cross-examine upon the record, at any time he chooses, any witness that has been called before the committee, and there is no desire, I am satisfied, on the part of any member of the committee, to prevent a full examination and a full understanding of the facts as offered by any witness.

Mr. LEA. I would make this suggestion then at present, that if Gen. Menoher will furnish the information which was promised yesterday afternoon, we go ahead with the evidence that you want to produce, with the understanding that if at some later date, if I so desire, I may have the privilege of continuing this examination.

Mr. FREAR. Certainly you will be accorded that right.

Mr. LEA. Then if Gen. Menoher will furnish the information promised last night we will proceed.

Mr. FREAR. I was just going to ask one or two questions of Gen. Foulois, who was cross-examined at considerable length yesterday.

ADDITIONAL STATEMENT OF MAJ. BENJAMIN D. FOULOIS, AIR SERVICE.

Mr. FREAR. When the committee was concluding its hearing yesterday, Gen. Foulois, as I recollect, the disclosures were to the effect, as indicated by the evidence, that something like 32,000 engines have been manufactured in this country?

Maj. FOULOIS. That was my understanding, sir.

Mr. FREAR. That was stated by this publication of Col. Mixer's, which no one has questioned as to its truthfulness.

To get at the application of that proposition, 32,000 engines in this country would be just as useful to an army in France as 32,000 hoe handles or wheelbarrows, unless they were furnished in aeroplanes or some kind of fighting machines to afford protection to the soldier. Is not that true?

Maj. FOULOIS. That is true; yes, sir.

Mr. FREAR. I have several other questions to ask, that were discussed in the cross-examination of yesterday, but I not going to go over the ground further.

TESTIMONY OF GEN. CHARLES T. MENOHER, UNITED STATES ARMY—Resumed.

Mr. FREAR. Gen. Menoher, I wanted to ask something about the Curtiss sale.

Gen. MENOHER. The sale of planes to the Curtiss Co.?

Mr. FREAR. The sale of planes to the Curtiss Co.; yes. Here is something I think had better be put in the record first. This is introduced as another exhibit. It is Gen. Menoher's statement of the number of flyers abroad, in reply to question No. 21 of the interrogatories submitted by the committee.

(Mr. Frear read a portion of the statement referred to, which is here printed in full, as follows:)

Question No. 21. Approximate number of English, French, Italian, and German flyers on same dates?

Answer. Approximate number of English, French, Italian, and German flyers on dates mentioned are as follows:

England:	Flyers.
June 30, 1917.....	4,500
June 30, 1918.....	6,500
Nov. 11, 1918.....	10,500
Germany:	
Dec. 17, 1917.....	5,570
May, 1918.....	6,576
Nov. 9, 1918.....	9,200
France:	
June 30, 1917.....	1,200
June 30, 1918.....	7,600
Nov. 11, 1918.....	9,000
Italy:	
June 30, 1917.....	1,200
June 30, 1918.....	2,040
Nov. 11, 1918.....	3,000

Note:

England: Figures furnished to Lieut. William G. King by the British air attaché from memory.

Germany: Figures compiled by Lieut. William G. King from data on German air organization furnished by the Military Intelligence Division.

France: Figures furnished under date of November 11, 1918, by French air attaché from memory; unable to remember the number of flyers for the other two dates, and approximate figures compiled by Lieut. King.

Italy: Figures of November 11, 1918, furnished from memory by Italian air attaché. Figures on other dates compiled from data obtained from Military Intelligence reports by Lieut. King. Have confidential figures from Military Intelligence Division, which differ in some instances from figures furnished, but it is believed the above are as nearly correct as is possible at the present time.

Report submitted.

WILLIAM G. KING,
First Lieutenant, Air Service.

Mr. FREAR. As I recollect, the list of American flyers was put in. Can you give that list, Colonel, of the American flyers, so that we can couple them up right at this time?

Col. WESTOVER. Do you wish the total number of United States flyers, or simply those overseas?

Mr. FREAR. Those that I just read were at the battle front, were they not?

Gen. FOULOIS. I doubt that, sir. I thought it meant the total number they had—England, France, Italy, and Germany.

Mr. FREAR. Suppose you give the figures both ways, and we can make the comparison afterwards if desired.

Col. WESTOVER. In the United States: On the first date, 134; on the second date, 3,944; on the date of the armistice, 7,118.

Mr. FREAR. That would be at the front?

Col. WESTOVER. No; that is in the United States.

Capt. SEATON. The number of those at the front I have right here before me. These figures at the front are for the week ending November 13, and based on the daily average for that week.

Mr. FREAR. We are asking now for the same three dates that were covered by the first statement, and I am trying to arrive at a basis of comparison between our forces and the various forces in Europe.

Col. WESTOVER. In the American Expeditionary Forces the United States had on the first date, 5; on the second date, 2,840; on the third date, 4,307. That makes the total number of United States pilots on those three respective dates 139 on the first date, 6,794 on the second date, and 11,425 on the third date.

Mr. FREAR. I think that makes the record sufficiently clear.

The sale of aeroplanes, General, made by the Government to the Curtiss Co. has been under discussion several times, and as that is a matter in which this committee is especially interested, so far as the disposal of property belonging to the Government is concerned, it felt that it might be advisable to get some data on that, and to ascertain the facts as you understand them. Will you please give us briefly what you know about the sale?

Gen. MENOHER. About the middle of December, 1918, just before I came to the Air Service, there were offered for sale, approximately 1,200 standard J-1 planes, with the Hall-Scott motors. Bids were to be opened on February 1 for these planes. Before the bids were opened, sometime near that same date, I learned for the first time of this sale, and I also learned at the same time that these planes had been considered unsafe and had been condemned—that that combination was unsafe. The statement made to me was that there was danger of their taking fire in the air and burning up the plane and the pilot. I considered it unthinkable that we should sell that combination to the public or to anyone else, and I gave instructions that the sale should be stopped. It appears that about the same time Gen. Kenley, who had the Division of Military Aeronautics at that time, also gave the same instructions, and his action seems to have been independent of mine. So he realized the same thing that I did.

Mr. FREAR. That is, stopping the sale to the Curtiss Co.?

Gen. MENOHER. To anyone. These were offered to the public—that combination.

About this same time I took up the matter of our program of planes, and our needs, and I called in consultation on this subject Col. Davis, who when I came to the service was the Chief of Training of the D. M. A. under Gen. Kenley, and we went through this whole situation as to planes, surplus planes particularly. After investigation we determined upon the number of planes that we needed of this particular type—I mean the training planes—for our program for the ensuing year. We set aside what we considered a very liberal allowance of training planes for our program, and then added 100 per cent to that number, so as to have a factor of safety, and then declared all the others of these training planes surplus.

Now, all the planes that we had were also listed in three lists; that is, in addition to the lists of service planes and training planes, we listed them as serviceable planes of various types, obsolescent planes, and obsolete planes. The standard planes that had been offered for sale previously were all listed as obsolete planes. The Curtiss planes, particularly the Curtiss JN-4-D, were listed as obsolescent planes. By that I mean that they were fast becoming obsolete. They had been made for some time and had been kept in storage, or had been used or partially worn. They were fast becoming obsolete. That is what we meant by obsolescent planes.

It was then decided to offer for sale these surplus planes of these two types, and I delegated to Col. Davis the task of offering these planes to the public for sale. Negotiations were opened, and on March 8 I wrote a letter to the Director Sales, Purchase, Storage and Traffic Division, setting forth the situation and recommending that authority be obtained for the sale of these planes, and asking him to sell them to the Curtiss Aeroplane & Motor Corporation for the reasons set forth in this letter.

This letter has already been published in the Congressional Record under date of June 23.

Mr. FREAR. That is, the letter that appears in the Army appropriation bill hearings, under the title Exhibit B?

Gen. MENOHER. Under the title of Exhibit B. It is on page 1655 of the Congressional Record of June 23.

The letters here published do not come in the regular chronological order. I have copies of this letter here with me, in addition to the letter appearing in the Congressional Record.

Now, I desire to make this letter and the subsequent letters bearing on the same subject a part of my testimony, because they set forth the matter in detail and exhibit careful thought on this matter. They were prepared carefully in the office.

Mr. FREAR. I think that will be agreeable to the committee, General, and if you will furnish them in their order they will be inserted.

Gen. MENOHER. I should also like to have incorporated in my testimony the correspondence that passed between me and the director of sales and the correspondence that passed between the director of sales and the Curtiss Co. on this deal, because they bear directly on the same situation.

Mr. FREAR. About how many are there?

Gen. MENOHER. I have them all in this pile; there are two copies of each.

Mr. FREAR. Possibly a dozen or fifteen letters?

Gen. MENOHER. No, sir; I think there are only four letters that I have to the director of sales; there are probably 10 letters all told.

Mr. LEA. The reporter will be permitted to put them in chronological order?

Mr. FREAR. Yes. But I would think that the letters with the Curtiss Co. would have an indirect bearing. It is simply a question of encumbering the record and interfering with the continuity. You may state briefly, if you wish, what appears in that Curtiss record.

Gen. MENOHER. I can give that, probably. The first thing that I request is that these letters of mine to the director of sales be made a part of the record; also the letters from the director of sales to me

bearing on the same subject. I should also like to have as a part of the record the letter, or at least an extract from it, memorandum for the director of sales, signed by the Secretary of War, May 21, 1919.

Mr. FREAR. Surely; that is certainly proper.

(The letters referred will be inserted in a subsequent hearing.)

Gen. MENOHER. The reason I speak of those other letters, the letters with the Curtiss Co. have a more or less direct bearing as showing the negotiations that were carried on in the matter of the sale of these planes and the contract which was finally drawn up. They are really more or less important.

Now, I would like to say this—maybe it will not be necessary if I go on. As I stated in my letter of March 8, there was attached a draft of a contract for the sale of these motors. A contract was afterwards drawn up, but it did not meet with the approval of the director of sales and it was not given effect.

Mr. FREAR. Why not?

Gen. MENOHER. Because it was not satisfactory to the director of sales.

Mr. FREAR. Did that contract—I am asking for information—contain a condition that the Curtiss Co. should have the right to purchase any additional aeroplanes—

Gen. MENOHER. That might be declared surplus? Yes; it had that.

Mr. FREAR. That gave them the exclusive right, did it not?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And the director of sales objected to giving the exclusive right to the Curtiss Co. to purchase all the planes from the Government?

Gen. MENOHER. Yes, sir; the negotiations fell through. They were taken up again and fell through. They were taken up, I think, three times and fell through three times. Finally the contract as it exists to-day were drawn up and agreed to by all parties, and the sale was consummated in that way.

Mr. FREAR. The contract does not appear in any of these hearings!

Gen. MENOHER. No, sir; I have the contract here.

Mr. FREAR. I think it would be well to insert the contract as a part of the record.

Gen. MENOHER. I am not certain that this copy can be spared, or that it is available right now for the record. [Handing document to Mr. Frear.]

That is that contract, and in addition at the back are the numbers of the planes.

Mr. FREAR. Instead of putting this in the record—it is so voluminous—I believe the better plan would be to file it as an exhibit, because there are at least 30 pages of typewriting.

Mr. LEA. This whole thing is in the contract?

Gen. MENOHER. That is the contract, and the number of the planes, etc., are on the back part of it.

Mr. LEA. I think that will be satisfactory, with the understanding that if any member of the committee hereafter thinks it necessary to have it in the record we may reconsider it.

Mr. FREAR. Surely.

Briefly stated, what does this contract provide, General?

Gen. MENOHER. It provides for the sale to the Curtiss Co. of 4,608 Curtiss OX-5 motors, 1,616 JN-4 Curtiss type aeroplanes without motors, and 1,100 standard J-1 planes without motors.

The reasons for recommending the sale of these planes to the Curtiss Co. are set out in detail and at considerable length in these two letters which I want to make a part of my testimony; that is, the letters of March 8 and March 24.

Mr. FREAR. Yes; they will be inserted in the record. Briefly stated, what is the substance of those letters? What was your reason for agreeing to sell at that time?

Gen. MENOHER. I have given part of the reason; that is, that they were surplus, that they were not needed for our program; we had set aside all we needed plus 100 per cent for a factor of safety. So we had practically twice as many as we thought we would have need for.

Mr. FREAR. May I interrupt you just there. What was your program and what was the number required for that program?

Gen. MENOHER. I can not give you that figure just now.

Mr. FREAR. What was the program, just briefly?

Gen. MENOHER. It was based on the strength for the Air Service that was allowed us in that bill of the War Department for 9,000 men, or a force for the Air Service of 24,000 officers and men. It was figured out from past experience that so many planes would be required for our training program to maintain that size force.

Mr. FREAR. Do you know how many planes were set apart for that purpose?

Gen. MENOHER. I can not give you the number, but it is something much larger than this, as I recollect it. The number was large, it went up into the thousands. As I recollect, we had something like 5,000 of these planes—4,000 or 5,000 altogether.

Mr. FREAR. What was the total number of planes that you had marked surplus?

Gen. MENOHER. The ones that are offered for sale here.

Mr. FREAR. Is that all?

Gen. MENOHER. That is all of this type that were offered for sale. We had some odds and ends of planes that were not considered in this deal at all—a small number of various types. These constitute practically the only two types of planes.

Mr. FREAR. These are both what are known as elementary training planes?

Gen. MENOHER. Elementary training planes; yes.

Mr. FREAR. That makes a total of 2,716 planes of both types, JN-4 and J-1?

Gen. MENOHER. Yes, sir.

Mr. FREAR. You called those obsolescent planes?

Gen. MENOHER. Obsolescent planes, and we called in the best talent we had in the matter of training in the consideration of this matter.

Mr. FREAR. Those are the same planes that are being used for training purposes in this country to-day, are they not?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And although they are obsolescent, nevertheless they are the usual plane that is being used?

Gen. MENOHER. Yes; but we have many of them that have been made at a later date, and there have been improvements made in them. These were the oldest of the Curtiss JN-4 planes. These were JN-4 As, Bs, Ds, and Canadians; now we have JN-4-H and JN-4-S.

Mr. FREAR. What was the character of the improvements, just briefly?

Gen. MENOHER. I can not give you that myself.

Mr. FREAR. The reason I ask is because I was informed that they were the very same kind of planes, those you were retaining, compared to those that have been sold to the Curtiss Co.

Gen. MENOHER. The changes are minor; that is, similar to the changes that we contemplate making in the De Haviland, for example, where we changed the cockpit so that the two observers are together, and put the tank in front. But still it is the Curtiss plane.

Mr. FREAR. That would not be material in an elementary training plane?

Gen. MENOHER. No; that would not be material.

Mr. FREAR. So that the planes we are retaining for the use of the Army are the same type of planes that were sold to the Curtiss Co.?

Gen. MENOHER. Yes; but the oldest—

Mr. FREAR. I understand. Now, the 4,608 OX-5 motors—is that the motor that is used by both these planes?

Gen. MENOHER. It was not the one that was used or intended for the J-1 standard plane. That was fitted for the Hall-Scott engine, but they can be installed in the Curtiss plane.

Mr. FREAR. That was the expectation when they were sold to the Curtiss Co.?

Gen. MENOHER. That was the expectation, that they were to have these OX-5 engines.

Mr. FREAR. What did these OX-5 motors cost the Government when they were purchased? Can you tell me?

Gen. MENOHER. The estimated price of the OX-5 motors to the Government was \$2,100.

Mr. FREAR. On the 4,608 motors?

Gen. MENOHER. Yes, sir.

Mr. FREAR. What does that total?

Gen. MENOHER. \$9,676,800.

Mr. FREAR. Have you the cost to the Government on the 1,616 JN 4's?

Gen. MENOHER. Yes, sir; this is estimated, but probably close to the correct figure. It amounts to \$6,664,000, at \$4,000.

Mr. FREAR. And 1,100 standard J-1 planes?

Gen. MENOHER. \$4,250 for them, or \$4,675,000. That makes a total of \$20,815,800.

The price obtained for the total lot was \$2,720,000, or 13 per cent of the cost to the Government.

Mr. FREAR. Do you care to make any further statement in relation to that?

Gen. MENOHER. There is just one other thing I wanted to say. in one of these letters. We have left in our possession approximately 2,000 Curtiss type training planes, consisting of JN-4-D's, JN-4-H's, and approximately 3,750 OX-5 motors.

Mr. FREAR. Those are the same as were sold to the Curtiss people?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Those are the same in every particular, are they not? That is, is there any changes of type?

Gen. MENOHER. The JN-4-H—has a superior motor.

Mr. FREAR. What was the basis on which the prices were fixed for the sale by the Government to the Curtiss Co.?

Gen. MENOHER. On bid of the Curtiss Co.

Mr. FREAR. And what was the bid on the different types of aeroplanes and motors to reach the figure of \$2,720,000?

Gen. MENOHER. Four hundred dollars for the engines, \$400 for the Curtiss planes, and \$200 for the standard J-1 planes, is my recollection. I think that will give the total of \$2,720,000.

Mr. FREAR. So that the 4,608 OX-5 motors, which cost the Government \$2,100 each under the Curtiss contract brought \$400?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And the 1,616 JN-4 aeroplanes that cost the Government \$4,000 each bring \$400 each?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And the standard J-1 planes that cost \$4,250 each bring \$200?

Gen. MENOHER. Yes, sir.

Mr. FREAR. What other bidders were invited, if any, to participate in that purchase, or that sale by the Government?

Gen. MENOHER. In answer to that I would like to refer to paragraph 7 of my letter of March 24. Paragraph 6 has some bearing on it as coming from the Bureau of Sales, but I would refer particularly to paragraph 7 of that letter, paragraph 8, and down to and including paragraph 11.

Mr. FREAR. May I ask you this: Was there any advertisement of these motors sent out to the press of the country?

Gen. MENOHER. My understanding is that there was; yes.

Mr. FREAR. What papers published it, and what were the returns?

Gen. MENOHER. I can not give you that.

Mr. FREAR. Was that before you took control?

Gen. MENOHER. No, sir; it was shortly after I came here.

Mr. FREAR. Who had charge of that advertising?

Gen. MENOHER. Col. Davis, who was my executive at that time. He is a retired officer and now out of the service.

Mr. FREAR. Do you know what papers it was advertised in?

Gen. MENOHER. I can not give you that, sir.

Mr. FREAR. Was it advertised in any papers?

Gen. MENOHER. My understanding is that it was.

Mr. FREAR. Do you recollect the advertisement, whether it described these various planes?

Gen. MENOHER. I can not give you that, because I did not see the advertisement.

Mr. FREAR. Is Col. Davis here?

Gen. MENOHER. No, sir; he is in New York.

Mr. FREAR. Is there anyone else who would know about this in your department?

Gen. MENOHER. Col. Gilmore, who is my supply officer at present, would probably know, but he is absent from the city at this particular time.

Mr. FREAR. Is there any statement in this letter of yours of March 24 to Mr. Hare that suggests that an advertisement had been made? I have been reading it to ascertain.

Gen. MENOHER. I see no reference in that letter at all to the matter of the advertisement.

Mr. FREAR. I am not seeking to embarrass you, General, but if there had been an advertisement is it not likely that it would have

appeared in this statement, which purports to give all the transactions leading up to the sale of the things?

Gen. MENOHER. I should say so; yes, sir.

Mr. FREAR. So possibly you may be in error in regard to that. I do not know myself.

Gen. MENOHER. As I say, these negotiations were carried on by Col. Davis—

Mr. FREAR. And this is something with which you had no direct connection?

Gen. MENOHER. I was not conducting the negotiations personally.

Mr. FREAR. All you did was to pass upon it?

Gen. MENOHER. I passed upon it; yes.

Mr. FREAR. Well, now, if there was an advertisement, were there any bids received?

Gen. MENOHER. I would like in answer to that to read exactly what these two paragraphs here state.

Mr. FREAR. Yes; you mean paragraphs 7 and 8?

Gen. MENOHER. Paragraphs 7, 8, and 9.

Mr. FREAR. I do not know that it is necessary to read them into the record unless you choose to do so. I am perfectly willing to have it.

Gen. MENOHER. Paragraph 7 states as follows:

In order that aeroplane manufacturers, and especially the Aircraft Manufacturers' Association, should not object to the sales in question and endeavor, through political influence, to prevent these sales, Col. Glover and Col. Davis agreed that it might be good policy to discuss the question with the representative of the Aircraft Manufacturers' Association and possibly with some of the manufacturers in question. Following this idea, Col. Davis called Mr. Bradley, secretary of the Aircraft Manufacturers' Association; Mr. Flint, of the L. W. F. Co.; and Mr. Houston, of the Wright-Martin Co., to his office for a discussion of the subject. Three or four days later Col. Davis had another conference with Mr. Keyes and Mr. Kepperley, of the Curtiss Aeroplane Co.; Mr. Ware, of the Thomas-Morse Co.; and Messrs. Mingle and Williams, of the Standard Aeroplane Corporation.

8. Mr. Flint, of the L. W. F. Co., suggested that a corporation be formed to take over from the Government at a fixed lump sum all of the surplus material in question and sell it to the public.

Mr. FREAR. What is meant by the L. W. F. Co.?

Gen. MENOHER. The Laminated Wood Fiber Co.

Mr. FREAR. At what place?

Gen. MENOHER. The factory is on Long Island. (Continuing reading.)

The Curtiss representatives promptly made a proposition to take back all of their products. At first thought Col. Davis, in consultation with Col. Deeds, informed these gentlemen that he did not think the War Department would approve returning each manufacturer's products to the said manufacturer, for the reason that such an act would immediately offer an opportunity for criticism on the part of politicians and disappointed buyers, and would not consider this phase of the question. However, in conference over the phone Col. Glover informed Col. Davis that resale to manufacturers was being made by the director of sales, and that there was nothing wrong in such resale—in fact, that it was highly proper to do so, in order that the manufacturers might protect his own product—and authorized Col. Davis to proceed along such lines if by so doing he could more satisfactorily solve the problem.

9. Mr. Flint stated that neither he nor his company would be interested in any material excepting the Hall-Scott motors. Later Col. Gillmore (Chief of the Supply Section) was informed that the Assistant Secretary of War, Mr. Crowell, had notified the board that no sale of aeroplanes should be approved until Mr. Flint had been given an opportunity to bid; that Mr. Flint had stated to Mr. Crowell at the aircraft show, held in New York March 1 to 15, that he was interested. Mr. Flint was called on the telephone and denied that he had made this statement, later said he would bid, and would present his bid to the Director of Air Service not later than Monday.

March 10. He failed to do so. He was again called on the telephone and stated that he would not bid.

10. Messrs Mingle and Williams have made a tentative offer on the Standard planes and a quantity of Curtiss OX-5 motors. They have made no definite offer. Their tentative offer is not as high as the Curtiss offer for the same material. The offer of the Curtiss Aeroplane & Motor Corporation is the only definite offer for any large quantity of this material that has been received.

That is as far as that goes.

Mr. FREAR. May I ask, General, referring to the first paragraph which you read—you say that in order that aeroplane manufacturers, and especially the Aircraft Manufacturers' Association should not object to the sales in question and endeavor, through political influence, to prevent these sales, Col. Glover and Col. Davis agreed that it might be good policy to discuss the question with the representatives of the Aircraft Manufacturers' Association and possibly with some of the manufacturers in question. Did you dictate that letter?

Gen. MENOHER. No, sir.

Mr. FREAR. Who did?

Gen. MENOHER. Col. Davis.

Mr. FREAR. What did he mean by it, or can you tell us? That is, I mean to say this. He says that in order that every aeroplane manufacturer, and especially the Aircraft Manufacturers' Association should not object to the sales in question—

Gen. MENOHER. It was the idea at that time that if these were offered for sale, there would be objection and that the matter would probably be stopped, as I understand.

Mr. FREAR. Why?

Gen. MENOHER. Because it might interfere with the business of the aeroplane manufacturers.

Mr. FREAR. That is for the same reason that objection was made to selling food, that it might interfere with the interests of the canners who produced the canned goods, and the packers who produced the meat, and the motor companies that produced the trucks, and all that. The same policy governed in this case?

Gen. MENOHER. It was considered good policy and good business to get the attitude of those people before we attempted it.

Mr. FREAR. So that politicians could not step in?

Gen. MENOHER. It was partly directed against these manufacturers, that they should not step in.

Mr. FREAR. But the manufacturers have not received any special consideration here; the politicians are coupled with them, and to that extent the manufacturers were contaminated in that case.

Gen. MENOHER. You understand that there was no reflection intended.

Mr. FREAR. I am trying to get the reason that actuated your department in seeking to prevent—if that did occur—any question arising by the Aircraft Manufacturers' Association, or those in a position of political influence. Would it not have been proper and would it not have been a businesslike procedure, unless you desired to protect the manufacturer himself, and his supply, as was done with the canners and others, to have advertised these planes for sale, either individually or collectively, and to have ascertained what bids could be obtained?

Gen. MENOHER. As stated down below there, we did not desire to sell these planes or to offer them for sale to individuals throughout the country, and for reasons stated below here, that the Government could not sell these planes under a guaranty. The Government could not go into the matter of guaranteeing these planes.

Mr. FREAR. Right at that point, does the Government guaranty the planes which it sells to-day under the order of the Secretary of War?

Gen. MENOHER. I do not understand what planes you mean.

Mr. FREAR. The Secretary of War stated to this committee that he had made an order that planes be sold to any individuals applying.

Gen. MENOHER. We have not sold any as yet, sir.

Mr. FREAR. But do you intend to guaranty the planes?

Gen. MENOHER. No, sir.

Mr. FREAR. What is the distinction then? If you do not intend now to guaranty the planes, what was the distinction in regard to the planes that were sold to the Curtiss Co.?

Gen. MENOHER. That was my idea; I can not go behind my idea. My idea was that it would be a grave mistake to sell these planes to private individuals without some guaranty behind them.

Mr. FREAR. But you are not going to give any guaranty?

Gen. MENOHER. I am only saying what my idea was at the time this sale was on and negotiations were being made, that if I had had a boy or a brother who wanted to purchase a plane I would have said, "Go to a reputable manufacturer and buy a plane if you have to pay twice as much for it, so that you will have one that will really have a guaranty behind it."

Mr. FREAR. Just take the case of your boy. Your boy goes to the Curtiss Co. to-day to buy a plane of this type. He is informed by the Curtiss Co., is he not, that the plane will cost him from \$3,500 to \$5,000—this has been put in testimony before this committee—and he gets the identical plane that you sold to the Curtiss Co. at the various flying fields, where it is in storage, for \$800. Is not that true?

Gen. MENOHER. I understand that the Curtiss Co. overhauls all those planes.

Mr. FREAR. But these planes are at the various flying fields now! You mean they are overhauled there?

Gen. MENOHER. I do not know whether they are overhauled there or not. I understood the Curtiss people were overhauling all these planes.

Mr. FREAR. I understood that nearly all of these planes were now that very few had been used? Is that right? Have you any figures there as to what proportion of them were new?

Gen. MENOHER. The contract gives the exact figures. Clause 10 of the contract bears on that. It says:

Of aeroplanes delivered to the purchaser in any one month not more than 9.06 per cent shall be class 1.

That is, new.

Not more than 35.27 per cent shall be class 2.

That is, used, JN-4.

Not less than 15.16 per cent shall be class 3.

That is, of the previous type, JN-4-A, JN-4-B, and JN-4-Canadian.

Mr. FREAR. What does that mean with reference to their being used?

Gen. MENOHER. I can not tell you about their being used, but those are obsolete machines.

And not less than 40.50 per cent shall be of class 4.

That is, the Canadian J-1, the standard plane, of which there were 1,100 machines.

Mr. FREAR. Who prepared that schedule that you have just been reading from?

Gen. MENOHER. It was prepared—it is a part of the contract; I can not tell you who prepared it. Probably it must have been prepared by Col. Davis.

Mr. FREAR. Then if Col. Davis prepared that contract, the planes had been assigned at this time, had they not?

Gen. MENOHER. They have been assigned.

Mr. FREAR. But have they been picked out anywhere?

Gen. MENOHER. They have been set aside at the various stations; yes, sir.

Mr. FREAR. Have you made any inventory of your planes to ascertain what have been used and what have not been used?

Gen. MENOHER. Yes, sir; there was an inventory made at the time these negotiations were going on.

Mr. FREAR. Have you the inventory, or is it to be made?

Gen. MENOHER. This contains the inventory right here.

Mr. FREAR. Of the number of planes that were used?

Gen. MENOHER. No, sir.

Mr. FREAR. But here is a condition in this contract that 9.06 per cent of the planes would be new. How can you ascertain from the contract—

Gen. MENOHER. Oh, I understand. This inventory was taken before this list was made up here. The inventory was taken by our representative and the Curtiss representative.

Mr. FREAR. Have you any inventory showing what planes were new and what were used? Have you ever had such an inventory?

Gen. MENOHER. I can not give you that answer just now.

Mr. FREAR. Well, it must necessarily have been made, in order to have had these terms fixed in the contract?

Gen. MENOHER. Yes, sir; that goes without saying.

Mr. FREAR. Well, if no inventory ever has been made, what was the purpose of inserting that?

Gen. MENOHER. I know an inventory has been made, because we had our representative go around to the various fields and list them.

Mr. FREAR. They have listed them at the various fields?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Did you give orders to some one else to that effect?

Gen. MENOHER. An order was given to some one in the office.

Mr. FREAR. So all the planes have been listed and inventoried?

Gen. MENOHER. Yes, sir. I did not quite catch the drift of your question.

Here is a statement that has been handed to me, and I have reason to believe that it is correct, that there were 246 new planes and 644 new motors.

Mr. FREAR. How many were used?

Gen. MENOHER. All the balance.

Mr. FREAR. That is, 9.06 and 35.27; that makes only about 44 per cent. Maybe I did not catch those figures when you gave them. You gave 9.06 per cent new machines and 35.27 used machines. Maybe the percentage of older planes and the percentage of Canadian and the standard planes makes up the total?

Gen. MENOHER. Paragraph 34 of the contract states:

It is understood that the purchaser shall receive not more than 246 new JN-4 aeroplanes without motors and not more than 644 new OX-5 motors.

Mr. FREAR. The cheaper types of aeroplanes that the Curtiss people are advertising to-day are something like \$2,000. Those are the new planes, are they not?

Gen. MENOHER. I imagine so.

Mr. FREAR. Now, Col. Davis called in Mr. Bradley, secretary of the Aircraft Manufacturers' Association. What is this association?

Gen. MENOHER. It is an association of manufacturers of aircraft. I do not know anything about it personally at all. I happen to know Mr. Bradley; I have met him two or three times.

Mr. FREAR. Well, it states here:

However, in conference over the phone, Col. Glover informed Col. Davis that resale to the manufacturers was being made by the director of sales, and that there was nothing wrong in such resale—in fact, that it was highly proper to do so, in order that the manufacturer might protect his own product.

What was the meaning of that, as you gather it?

Gen. MENOHER. Many of these planes were not made by the Curtiss Co. itself; they were farmed out to other companies, so that they are not all Curtiss-built planes, although of Curtiss type. That was one reason, I understand, why the Curtiss people wanted to get their own planes offered for sale, in order that they might protect their name with the general public.

Mr. FREAR. But they bought those JN standard planes too?

Gen. MENOHER. Yes; I do not know the reason governing that. I was only told that was the reason they had done it.

Mr. FREAR. Supposing the Curtiss people had said that instead of \$2,700,000 they would only offer \$1,000,000 for their planes; would it have been the policy of the department to accept that offer as made to protect the manufacturers? I am trying to get at the question of policy governing this sale and other sales.

Gen. MENOHER. I understand. That was one of the reasons and the other reasons are set out here. We did not need this material, and it was taking up valuable storage space. All the standard planes were practically in one place, down at Houston, Tex., where we were paying large storage charges on them—18 cents a square foot I know we were paying; and they occupied a large space, 1,100 of them. So we desired to dispose of those planes that we did not need for our program. They were quite naturally deteriorating, and deteriorating very fast. Anyone who knows anything about the construction of an airplane knows that it requires very great care for its use, and that when it is in storage it must be stored under the best of conditions or it will not last very long, and climatic conditions affect it.

Mr. FREAR. We are all agreed as to that; agreed except in the making of sales in this way.

Gen. MENOHER. Of course, the Government wanted to get the biggest price it could for these planes, and I do not think anyone will gainsay that.

Mr. FREAR. We will agree that that was the intention, but what about the results?

Gen. MENOHER. In paragraph 13, subsection (b) of letter to Assistant Director of Munitions, Mr. Hare, of March 24, 1919, I said:

It saves the Government from liability for damage claims because of defective materials sold to individual purchasers, for claims for infringements of patents, and so forth.

Mr. FREAR. If you did not offer any advertisements and nothing appears here except the consultation over the telephone, so far as this statement is concerned, and you met one or two men, are you sure you were getting the best price you could get?

Gen. MENOHER. Yes, sir; I felt absolutely certain we were getting the best price we could, in this country or anywhere else, for these planes.

Mr. FREAR. Isn't it true there are on file, either in your department or elsewhere, applications for a number of hundreds of these machines, where the prices offered are larger than those paid by the Curtiss Co.?

Gen. MENOHER. I am not certain that they are larger. I have a statement as to the number of inquiries we have had in regard to planes.

Mr. FREAR. How many inquiries with offers?

Gen. MENOHER. Well, I haven't got them separated. These are all the inquiries that have been made in regard to planes, and the total number of inquiries regarding the purchase of planes to date has been 756. The inquiries specifying Curtiss planes have numbered 233; inquiries from qualified flyers 169. So the inquiries have nearly all come from people who are not qualified flyers—possibly purchasers who wanted to purchase them and sell them to flyers, or to put them into the hands of flyers. We have had a number of inquiries of that kind.

Inquiries specifying from 2 to 4 planes, 50; inquiries specifying 5 to 9 planes, 6; inquiries specifying 10 to 24 planes, 7; inquiries specifying 25 to 49 planes, 6; inquiries specifying 50 to 100 planes, 1.

Mr. FREAR. Who was that from?

Gen. MENOHER. I can not tell you that. I have not the information here.

Mr. FREAR. With those inquiries were any offers received?

Gen. MENOHER. For standard JN planes, the price ranged all the way from \$100 to \$600.

Mr. FREAR. Does that include the engine?

Gen. MENOHER. That is without the motor.

Mr. FREAR. They were sold to the Curtiss people for what?

Gen. MENOHER. \$200; lump sum (1,100 planes).

Mr. FREAR. That was wholesaling, and would be more profitable to the Government, provided there was no large discrepancy in the amount offered.

Gen. MENOHER. Standard planes with Hispano-Suiza engines—which, of course, is a high-priced plane—are from \$200 to \$3,000.

Mr. FREAR. Have you considered any Hispano-Suiza engines or planes as surplus?

Gen. MENOHER. No, sir; that is a modern engine.

Mr. FREAR. That does not include any engines that have been declared surplus?

Gen. MENOHER. It does not include any engines that have not been declared surplus.

Mr. FREAR. Go ahead.

Gen. MENOHER. For the Curtiss planes the offers ran from \$600 to \$2,500, but as to the number of them I do not know.

Mr. FREAR. They ran as high as \$2,500?

Gen. MENOHER. Yes, sir.

Mr. FREAR. They were what?

Gen. MENOHER. Curtiss planes in general.

Mr. FREAR. And they sold for what?

Gen. MENOHER. \$400 for the planes and \$400 for the motor.

Mr. FREAR. Is there any plan in your department that provides for sales to pilots generally?

Gen. MENOHER. No, sir. That matter has not been entirely thrashed out, but it is under consideration, and we have had—the vital question with us right now is the matter of disposal of the other planes that we have that we can probably dispense with in our program.

Mr. FREAR. Have you fixed any price on any of the other planes?

Gen. MENOHER. No, sir.

Mr. FREAR. I understood the Secretary of War to say to our committee that he made an order that they should be sold for \$400—didn't he, Mr. Lea?

Mr. LEA. That is what I understood him to say.

Mr. FREAR. He stated to our committee that such an order had been issued by him.

Gen. MENOHER. I have no recollection of any such order having reached us.

Mr. FREAR. Well, it ought to have gone to you. He may have been mistaken in that.

Mr. LEA. I wouldn't say that he said it was an order, but I understood it to be a determined policy.

Mr. FREAR. Yes; that might be so. Yet no pilot, as I understand, can buy a machine from the Government, nor from any one else, but he must go to these manufacturers, who have bought them from the Government at these prices, and a pilot is obliged to pay the Curtiss price. That is the situation to-day, isn't it, Gen. Menoher?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Do you think that is a proper situation? Do you think you should leave the pilots, the men who have been in the service of the country and who want to buy machines—do you think that is a right situation to leave the Government and the people in? Do you think you should protect the Curtiss Co. so that they can put a price of \$5,000 on the machines we have sold to them for their small price; put them in a position where they can say to pilots or to any other people who want to use them, "You can get them but you must pay our price for it." Or if they come to the Government you put them in a position where you say—"You can get the machines, but you must go to the Curtiss people to buy them and pay their price for them." That stabilizes prices for the manufacturers, I can see, but is that a fair position for the Government to assume?

Gen. MENOHER. When I offered these reasons, I had in mind the protection of the people in general as well as the flyer who may be going up in the air. I had nothing in mind in regard to the manufacturers' association. I had the other in mind; and I then considered and still consider that it would have been a great mistake to have turned loose these planes to the general public, under conditions existing then and that exist now, whereby they would have been or would be now flown by irresponsible people, people without license, and from which there would have been interminable trouble. I believe it to be the proper policy for the Government to keep a firm control on sales outside of the service.

Mr. FREAR. Then it is your judgment that it should be the policy of the Government to send the pilots, or any one who wants to purchase a machine, to the Curtiss Co. or some other airplane company, where it is assumed they have some proper method of inspection whenever they desire to buy an airplane?

Gen. MENOHER. Yes; where the purchaser can hold the manufacturer or the seller liable in case of accident. You can not do that in the case of the Government.

Mr. FREAR. You are opposed to the Government selling them to pilots?

Gen. MENOHER. I am opposed to the Government peddling planes out.

Mr. FREAR. So that no matter how many are held as surplus here—after the policy of the department will be to sell them to manufacturers and not to individuals?

Gen. MENOHER. That would be the effect of it. I will go a little further than that. I think it would be a very great mistake for the Government to ever try to manufacture airplanes; to go into the manufacture or sale of planes, I mean.

Mr. FREAR. That would further stabilize the business of the airplane manufacturers?

Gen. MENOHER. Yes, sir; but that is not what I have had in mind at any time. We have had accidents enough, the Lord knows, as things have been, but we would have had a great many more if we had sold these planes to the public generally, and let anybody who had the price come forward and purchase a plane and go out and try to fly it, or to turn it over perhaps to some irresponsible pilot, or some untrained pilot.

Mr. FREAR. Is that the policy of the Government in regard to sale of trucks, or anything else that the Government is disposing of?

Gen. MENOHER. Possibly not, but—

Mr. FREAR (interposing). Well, maybe that is not considered as dangerous a device.

Gen. MENOHER. No. Only the other day we had a report that a young man who had been flying one of these planes that had been turned over to the Curtiss Co.—and it had been inspected by himself and other officers and was considered absolutely safe, but it had been in storage for some time—as I started to say, he went out and flew it and it collapsed. That very same thing would have been happening all the time if these planes had been sold to the general public.

Mr. FREAR. That occurred constantly before the war, when these companies were selling airplanes, as I understand; and it is usually

very hard to tell whether it is the fault of the pilot or of the machine when an accident occurs.

Gen. MENOHER. I will agree to that, but we should eliminate the sources of danger as far as we can.

Mr. FREAR. Then, you are opposed to selling to pilots, to men who are able to handle their own machines, men who are mechanics and able to inspect a machine and to determine whether it is safe to fly—I say, you are opposed to selling anyone except to manufacturers, any of these machines?

Gen. MENOHER. No, sir; I do not put it as strong as that.

Mr. FREAR. What do you say?

Gen. MENOHER. If we keep these planes in the hands of qualified and responsible pilots, all well and good; but we can not do that.

Mr. FREAR. So this policy must necessarily be pursued. If you could, you would be willing to let a limited number of individuals purchase airplanes, but as long as you can not confine it to them, you are opposed to selling them to anyone?

Gen. MENOHER. I think that is true.

Mr. FREAR. I am just trying to get the policy of the department.

Gen. MENOHER. If it is decided definitely, all right.

Mr. FREAR. Who would be the one to decide it?

Gen. MENOHER. The War Department.

Mr. FREAR. Who do you mean, when you say "the War Department?"

Gen. MENOHER. That generally means the Secretary of War.

Mr. FREAR. Have you ever consulted with the Secretary of War as to his own attitude in regard to it?

Gen. MENOHER. I would like to read a letter that I have asked to put in the record, under date of May 21, 1919:

MAY 21, 1919.

Memorandum for the Director of Sales.

Subject: Sale of airplanes to Curtiss Aeroplane & Motor Corporation.

I have examined the attached papers. It seems to me that the sale in question ought to be made. The planes proposed to be sold are, of course, rapidly becoming obsolescent. The opportunity for selling them to individuals is not open to us, and should the War Department propose to sell airplanes to individuals because of the very hazardous character of their use. Should the Congress decide to direct at comprehensive training of National Guard or other forces in aircraft, a different type of plane ought to be used for that purpose.

NEWTON D. BAKER, *Secretary of War.*

Mr. FREAR. I recognize that, and have seen it before. He says the planes to be sold are rapidly becoming obsolescent. But the planes being sold by the Curtiss Co., which they are selling for \$5,000 are the most valuable that they have to-day.

Gen. MENOHER. The most valuable that they have, but we have other planes which we consider much better than theirs.

Mr. FREAR. Which planes are those?

Gen. MENOHER. The Vought, which we call the VE-7.

Mr. FREAR. Manufactured by whom?

Gen. MENOHER. By Vought & Co. Only 7, 8, or 10 of them have been produced.

Mr. FREAR. Is the department opposed to the Government manufacturing its own planes or selling planes? I understand that the planes which were manufactured by the Curtiss Co. and sold to the Government and then resold to the Curtiss Co. at these prices, the Secretary of War says, are obsolescent; and yet, while those planes

were sold to the Curtiss Co. for \$800, they are being resold by the Curtiss Co. to the public at \$5,000 apiece; and we have no means, if we chose to do so, to supply the demand.

Gen. MENOHER. No; we have never—

Mr. FREAR (interposing). If there are any further planes to be declared surplus they will be sold to manufacturers?

Gen. MENOHER. We have not declared any further surplus.

Mr. FREAR. If you should do so?

Gen. MENOHER. That depends upon what the Secretary of War may decide as to the policy.

Mr. FREAR. He announced the policy to the committee, but I do not know what he purposes doing about instructing you.

Gen. MENOHER. That will depend upon what the policy is to be in that respect. We have no further surplus of Curtiss planes.

Mr. FREAR. If he does declare it is the policy to sell planes to pilots, what will be the planes to be sold?

Gen. MENOHER. Nothing but some odds and ends of various types that we have. We have some that were purchased here, there, and other places, and sent abroad as models, or maybe for inspection.

Mr. FREAR. You have a good many Curtiss planes that have never been used, haven't you?

Gen. MENOHER. About 2,000, but they have been set aside for training.

Mr. FREAR. For Army training?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Now, the Secretary of War in that letter which you have just read states that the planes, if we desired to use them for National Guardsmen, must be provided of a different type. What about that?

Gen. MENOHER. I think that when he wrote that letter he thought we were going to get some of a new type. We submitted an estimate for the purchase of about 1,100 of a new type, of the latest and most up-to-date type of plane.

Mr. FREAR. Purchased of what company?

Gen. MENOHER. Of Vought & Co. The Martin bomber, which is quite much in evidence right now, going around the rim of the United States—

Mr. FREAR (interposing). That that you are about to read about are the plans that you suggest be embodied in the new program?

Gen. MENOHER. I was mentioning the Martin bomber, night bombing plane. It is considered perhaps the best plane in the world.

Mr. FREAR. For elementary training you expect to use in the National Guard, what? I am confining this inquiry to the statement of the Secretary of War as to what you would provide for the National Guard, so far as my present inquiry is concerned.

Gen. MENOHER. We have enough planes here, and 100 per cent more than our program.

Mr. FREAR. That is, that you have retained by the department?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Two thousand planes?

Gen. MENOHER. Yes, sir.

Mr. FREAR. They are the De Haviland-4?

Gen. MENOHER. No, sir; they are the JN-4.

Mr. FREAR. As to the JN-4, is it or not the plane you have been selling to the Curtiss Co.?

Gen. MENOHER. Yes, sir.

Mr. FREAR. The Secretary of War says you are going to provide a different type of machine for the National Guard; that you wouldn't let them use the kind you have sold to the Curtiss Co. And yet, as I understand from you, that is the identical JN-4?

Gen. MENOHER. I think we will use this for elementary training.

Mr. FREAR. That is what you would use for the National Guard?

Gen. MENOHER. And these other machines, the latest and most up-to-date known, would be used for advanced training.

Mr. FREAR. Those would be used for advanced training?

Gen. MENOHER. Yes, sir. And then we would have great numbers of De Havilland planes, which are available and can be used for advanced training, although they are rated as a service plane.

Mr. FREAR. You have nothing there for elementary training, for the National Guard?

Gen. MENOHER. No; for the National Guard we would likely have a large number of pilots, I mean in the National Guard, who have kept in training, and we could provide for them.

Mr. FREAR. They would use what type of plane?

Gen. MENOHER. The DH-4, the most up-to-date of that type, which, of course, is a service plane, but it can be utilized for advanced training.

Mr. FREAR. Has there been any estimate in connection with the National Guard of the country as to the number of squadrons that would be organized under this new plan, the number of air squadrons?

Gen. MENOHER. No, sir; we have not, because we had orders from the War Department stating the policy to be that for the present no units of the National Guard would be organized, and that that matter would be contingent upon further legislation in regard to a national guard. So that we have not figured on the number of squadrons of airplanes we would need for the National Guard, because we do not know what the size of the National Guard will be. But it will be a simple matter to provide 900 or 1,000 planes, and to add to that number if it should be necessary.

Mr. FREAR. I think I have seen it stated that there would be about 40 States, with something like a squadron each, and that it would take about 1,000 planes?

Gen. MENOHER. Yes, sir.

Mr. FREAR. How many to the squadron?

Gen. MENOHER. About 25 planes to the squadron.

Mr. FREAR. And you would need about 1,000 planes?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Would you have enough planes, with 100 per cent extra, to supply the National Guard, provided that organization is organized, without repurchasing from the Curtiss Co.?

Gen. MENOHER. Yes, sir. The matter did come up as to the need of the National Guard, and I think there was reference in one of these letters to that.

Mr. FREAR. What is the position of the department as to that?

Gen. MENOHER. In one of my letters---

Mr. FREAR (interposing). What are you reading?

Gen. MENOHER. Some letters I have placed in evidence.

Mr. FREAR. Was that put in the record by some Senator?

Gen. MENOHER. It is this Exhibit B that I have before me. It is in the hearings of Mr. Hare, director of sales, before the Senate committee, as I understand.

Mr. FREAR. Is it a hearing, or a letter inserted in the record, or what is it?

Gen. MENOHER. It is the statement of Mr. Hare.

Mr. FREAR. Inserted by whom?

Gen. MENOHER. By Senator Frelinghuysen. It is my letter of May 20, 1919, and in the last section, section 8 of that letter, and I said:

It is my opinion that if the Air Service is to be required to furnish the militia planes for training purposes, that the number required to be furnished should be deducted from the total number of planes and motors declared surplus. This opinion is based upon the assumption that the Air Service will consist of the personnel recommended by the General Staff.

As you will see, my statement is to the effect that if the militia, and that means the National Guard, needs planes for training purposes, that the total number declared surplus should be reduced by the number necessary to train the militia.

Mr. FREAR. Do you expect to make any further declaration of surplus?

Gen. MENOHER. We do not.

Mr. FREAR. You have sold all the surplus to the Curtiss Co.?

Gen. MENOHER. Yes; but shortly after this, as I recollect, came the statement that there would be no reorganization of the National Guard for the present; not until some legislation was enacted to determine the size of the National Guard, and that then we could figure out what was needed in the way of a program.

Mr. FREAR. Returning to the contract, and I am asking for information, was there any difference of opinion between you and Mr. Hare, or his department, in regard to the sale of these machines?

Gen. MENOHER. As I understand there was some difference in the terms of the contract only, but nothing else.

Mr. FREAR. That was the one in which the Curtiss Co. insisted on having the sole right of purchase?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And your department was in favor of that provision, was it?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Why?

Gen. MENOHER. It was the only way in which we could have possibly made the sale at all.

Mr. FREAR. Well, as it turned out, it was not the case, because you made the sale without that provision?

Gen. MENOHER. That condition does not appear to the same extent as it appeared at first, but there is a provision that if we declare any more surplus they can breach the contract.

Mr. FREAR. They have the right to do what?

Gen. MENOHER. To breach the contract. That is provided for in paragraph 20.

Mr. FREAR. How is this contract being enforced?

Gen. MENOHER. It is being enforced now, and it would take some 12 or 14 months to complete it.

Mr. FREAR. At any time prior to the expiration of that time should we declare further surplus and refuse to let the Curtiss Co. purchase at the same price they can break the contract.

Gen. MENOHER. This is what paragraph 20 of the contract provides:

If at any time during the period of this contract additional Curtiss type of airplanes, or motors, or both, are declared surplus and available for sale by the properly constituted authority of the War Department, it is agreed that the contracting officer shall inform the purchaser of the number and location thereof. Upon receipt of such notice the purchaser may give notice of the termination of performance of the contract, or 30 days after such notice, unless said purchaser has agreed to buy such surplus material at such price * * *.

Mr. FREAR (interposing). Did the Curtiss people insist upon that provision being inserted in the contract?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Of course that is not as strong a provision as the one that gave them the right to purchase. This simply gives them the right to cancel the contract?

Gen. MENOHER. Yes, sir.

Mr. FREAR. Did you get any others from the Standard Co.?

Mr. LEA. Let me interpose right there; Did I understand that aright, that either party has the right to be released from further carrying out that contract?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And that is the provision under which it has been insisted that the Government has the right at any time to revoke the contract by simply declaring a surplus?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And if to-day we choose to declare any additional surplus we could revoke the contract?

Gen. MENOHER. Yes, sir.

Mr. FREAR. What do you think of the policy of doing that?

Gen. MENOHER. Of declaring a surplus?

Mr. FREAR. Of revoking the contract?

Gen. MENOHER. Well, unless there is some need for it. I do not think we ought to do it.

Mr. FREAR. You have expressed your own opinion with regard to the policy of selling to pilots—

Gen. MENOHER (interposing). We have a certain number of planes declared as surplus. The calculations were based on our program, and as I see it now we have no reason to expect that we can declare any more surplus; that we need all of the 2,000 planes we have. We know, though, if we simply wanted to breach the contract we could do it, but I do not think we should do that without a good and sufficient reason.

Mr. FREAR. We are agreed on that. Of course the whole question would come up then as to whether the Government would have fared better, and properly so, by selling to individuals—and of course your objection to that lies in the question of safety of the individuals in flying and the failure to give a guaranty?

Gen. MENOHER. Yes.

Mr. FREAR. I have not gone into the question whether the Government could have inspected these machines, because you say the Curtiss people sold them and people were killed after that?

Gen. MENOHER. Yes, sir.

Mr. FREAR. But your belief is, we ought not to sell, under any circumstances, to pilots?

Gen. MENOHER. No; I do not quite mean to go as strong as that. I say, if we could be sure that these planes would remain in the hands of responsible pilots we could sell to them.

Mr. FREAR. That is the basis of your objection?

Gen. MENOHER. More or less. I believe it would be the greatest mistake in the world, not only for the public at large in the matter of the safety of the public, but also as to the matter of the attitude of the people toward aviation. I think it would be the greatest mistake in the world for us to sell planes to just anybody who has the price to pay for them.

Mr. FREAR. Did the Standard Co. bid on airplanes?

Gen. MENOHER. I will have to refer to this letter again.

Mr. FREAR. All right.

Gen. MENOHER. In my letter of March 24, 1919, to Mr. Hare, Assistant Director of Munitions, in section 10 of that letter I said:

Messrs. Mingle and Williams have made a tentative offer on the Standard planes, and a quantity of Curtiss OX-5 motors. They have made no definite offer. Their tentative offer is not as high as the Curtiss offer for the same material. The offer of the Curtiss Aeroplane & Motor Corporation is the only definite offer for any large quantity of this material that has been received.

Mr. FREAR. So we sold Standard machines to the Curtiss Co. because their offer was better?

Gen. MENOHER. The offer of the Curtiss Co. was the only definite offer for any large quantity of this material that had been received.

Mr. FREAR. Where the machines were offered for sale who would determine whether they were of as good a type as the machines which they retained?

Gen. MENOHER. As I recollect they would check that up.

Mr. FREAR. That will appear in correspondence of your department?

Gen. MENOHER. I think it does.

Mr. FREAR. Was that called to your attention?

Gen. MENOHER. I can not recollect just now.

Mr. FREAR. As I understand, the policy of the department is in case any more planes are sold they will not be sold except by order of the War Department.

Gen. MENOHER. Unless I can devise some better machinery for putting the machines in the hands of responsible parties.

Mr. FREAR. That is a practical impossibility, because the pilot himself could turn around and sell it to an individual and there would be no method of following the use of the plane, if I gather your idea.

Gen. MENOHER. Yes.

Mr. FREAR. Here is a suggestion, General. We had a great many thousand pilots. It was stated in the testimony this afternoon that we had something like 16,000?

Gen. MENOHER. I think it was 16,000; yes.

Mr. FREAR. It will require an order from the Secretary of War to permit those pilots who have been driving the machines over the battle fields to permit them to buy from the Government?

Gen. MENOHER. Yes.

Mr. FREAR. Would it be fair to say to those pilots who have returned: "You have served your Government; you have given everything—your time; you have offered your lives if necessary—and

now the Government says to you to go back to the Curtiss Co. and pay \$5,000 for a plane to fly, although we sold it to them for \$800;" would that be fair if they are qualified to pass upon the merits of the machine themselves?

Gen. MENOHER. That is not necessary in the case of reserve pilots, but with the men who have been entirely separated from the service.

Mr. FREAR. No one can buy, of course, under this arrangement, from the Government; everybody has to buy from the Curtiss Co.?

Gen. MENOHER. Or from some other companies.

Mr. FREAR. There is practically no other company that has these training planes.

Gen. MENOHER. Of course there are sales to some other companies in small numbers; to other manufacturers of planes, now and then.

Mr. FREAR. In justice and fairness to these pilots, these 11,000 pilots, or whatever the proportion of them is who can present certificates of ability to fly and test the machine themselves, would it not be the fair thing to ask the Secretary of War to permit these machines to be sold to them?

Gen. MENOHER. Perhaps so. I think, though, that there is no great number of pilots who wanted to secure planes; there were only 169 who made inquiries.

Mr. FREAR. There was no advertising. There were no offers except from the Curtiss Co. to buy them?

Gen. MENOHER. There was none, excepting as they called on the telephone, etc.

Mr. FREAR. If they had said, "We will sell 100 planes to this company and 100 to that company, or 100 to this city or to that city," of course you might have gotten very many more bids. That is possible?

Gen. MENOHER. I think the matter of the sale of these planes was very generally known throughout the country.

Mr. FREAR. It is mentioned in here two or three times in your memorandum forwarded to the Director of the Air Service to look out for politicians. Col. Deeds felt that it was a pretty serious proposition to say to a company, "Yes, you can buy at your own figures"; he thought that was subject to criticism. Of course, the question of who were politicians and the question of who Deeds meant and everything else resolves itself largely into a mental standard. A politician may be just as much interested in the affairs of the Government and may have just as high standards as a man who happens to be in the War Department, even in the air branch. That is true, is it not?

Gen. MENOHER. Yes, sir.

Mr. FREAR. And you would not say but what that is true and that politicians may be actuated by public standards equally as high?

Gen. MENOHER. No.

Mr. FREAR. Here is the suggestion that arises when it appears that in order to meet the complaints of politicians—and I take that to mean he refers to men in public life—they try to put it so that on its face it is a public sale, but as a matter of fact there were no public sales except to the Curtiss Co., which bought \$5,000 planes for \$800, a total of \$2,700,000 for what was worth \$20,000,000.

Gen. MENOHER. Thirteen per cent.

Mr. FREAR. I think the facts are very clear and that they are agreed upon. I do not know that there is anything further to ask.

Gen. MENOHER. I would like to state that in my opinion, at the time and now, the Government made a very good bargain in the sale of those planes at the price received, when you consider the deterioration that goes on and the storage space that is necessary to care for those planes, and the labor, etc. Those all affect the proposition to a great extent.

Mr. FREAR. That is true, but of course we have been keeping these goods eight months in storage, except as Curtiss could take them off our hands, during which time if it had been known to the public and to these 11,000 observers, undoubtedly a good many machines would have been sold so that they would not have been in storage. Just how many is problematical.

Gen. MENOHER. I think a small percentage would have been sold and the rest would have still been left on our hands.

Mr. FREAR. That is your thought. I want to ask one question, which is very important on this subject. What is your judgment—you are now in charge of the aircraft work of the Army?

Gen. MENOHER. Yes, sir.

Mr. FREAR. What is your suggestion, if you have any to make, regarding the future policy of handling the aircraft problem?

Gen. MENOHER. You refer to the matter of a separate Air Service?

Mr. FREAR. Yes; and whether or not you think the War Department and the Navy Department should have separate branches, or what is your judgment?

Gen. MENOHER. I am not prepared to advocate a separate Air Service at this time.

Mr. FREAR. You believe that it is better to have the War Department at least retain its own control over the machines used by the Army?

Gen. MENOHER. Yes. They will do that under any proposed separate Air Service, as far as I can learn.

Mr. FREAR. If to-day the Government were confronted with another war, what would be the methods of providing the Army with new aircraft; would you believe that it would be proper to let it remain with the department the same as it has been in the past?

Gen. MENOHER. I see no reason just now to think that we would not be able to function properly. This matter of a separate Air Service is a thing that involves another department, the creation of a new department of the Government and a Cabinet officer, and it is an exceedingly important thing.

Mr. FREAR. Certainly.

Gen. MENOHER. And that is something that should be looked into at once. It should be given grave thought, and I do not think it has been given the grave thought that the matter demands. I think a good deal of the support of the separate Air Service plan is born of dissatisfaction. There has been a good deal of disappointment at not getting promotion, and some of it is due to a desire for more rapid advancement in the future, a feeling that perhaps the War Department is not entirely in sympathy with a man and that it does not understand the problem. We are not as temperamental as they seem to be.

Mr. FREAR. It comes from people inside the department, but the people outside the department who have drafted these appeals are not connected with the War Department.

Gen. MENOHER. But a very great deal of the support, I think, does come from people in the War Department.

Mr. FREAR. And it comes from very able men in the War Department who are flyers and who had actual service in the war and who had good records in flying, and of course we can not discount the fact that their judgment ought to have some bearing even though they are sensitive over the fact that they have been demoted, which I understand is your stand.

Gen. MENOHER. I said it was largely due to that; I said in a measure it was due to a desire perhaps to better their condition.

Mr. FREAR. You would not think for a moment that the disappointment which was created over the absolute failure of the War Department to make good during the war had anything to do with the judgment they have formed?

Gen. MENOHER. I do not believe that.

Mr. FREAR. Do you say that that should be an element entering into their judgment?

Gen. MENOHER. It would naturally affect it to a certain extent.

Mr. FREAR. Would you not think it would affect it to a large extent? Take the case where certain men in the War Department recommended an appropriation of \$640,000,000 for an aircraft program.

Gen. MENOHER. Yes, sir.

Mr. FREAR. And then the aircraft program fell down.

Gen. MENOHER. It did.

Mr. FREAR. Yes; and it fell down not because of your participation, let me say, and I am very pleased to say it, because I know you had no part in that; but it fell down while in the hands of the War Department, a department that has never functioned in the matter of commercial business. Has it?

Gen. MENOHER. As I understand, it fell down while in the hands of the War Department, but the War Department called into service what it considered, and I guess what the country at large considered, the best judgment we had in the country in that respect. At least the attempt was made to do that. Now, if they had been called into service in a separate department I believe the same results would have been obtained: they would have called in the same men and the same result would have been obtained, because from what I can learn those that were called in to service were given unlimited funds.

Mr. FREAR. And unlimited power.

Gen. MENOHER. Would not the same thing have occurred if a separate department had been created and these same gentlemen had been called in for service in that department? They were not hampered by the War Department.

Mr. FREAR. Your question addressed to me contained a provision that makes a distinction; if these same gentlemen were called in, undoubtedly that would be true.

Gen. MENOHER. Yes.

Mr. FREAR. If these same men were called in that would be true, but was there any other department that fell down in an important branch of the service like the Aircraft, where the entire power was

given by the officer in charge, Gen. Squier, to Deeds, and afterwards to others who, whether for a personal interest or otherwise, failed to meet the pledges and the promises that were made to the Government, although Congress did its full share in providing the money; is there any other department than the War Department that fell down like that?

Gen. MENOHER. Not to the same extent. But the thing that has been lost sight of is the element of time. The element of time in the production of aeroplanes is the most important one of all, I think. To give you an idea as to how important it is, we invited bids for 200 of these Martin bombers to be produced. That was done about April of this year, the planes to be delivered by the 1st of April, 1920. That was a year and three months. At first the manufacturers said they could not do it. They called Mr. Martin, the inventor of the plane, and he was an engineer and a very high type of man, and he said they could not do it; but we insisted.

Mr. FREAR. What reason did he give?

Gen. MENOHER. Time. We insisted that it must be by that time. We wanted to see what could be done; we wanted to test out this matter. He went and figured and called in his best experts to figure on the matter, and he finally said that by increasing his facilities to a certain amount he might be able to do it; but he gave as an irreducible minimum for the tuning up of his plant, that is, getting the tools ready to go into production, 34 weeks; that is eight months. He said he could not get ready under any circumstances to begin to produce a plane in the quantity that was needed to fill that program until the expiration of 34 weeks. You see, that is quite a time, and that is the reason I asked the question yesterday in regard to this Spad contract, that they continue with the order in so far as planes have been contracted for production, and there was a difference of only two weeks' time elapsed between those two telegrams.

Mr. FREAR. You mean on the 23d?

Gen. MENOHER. Yes; so that I think as a rule the element of time is lost sight of in this matter of the production of planes. The plane is a very delicate machine. I know that the Martin bomber rates about as simple in construction as any machine, and it contains 16,000 different pieces. It can not be produced in five minutes; it requires a very high type of skilled workmen to produce it. During the time they were producing in this country a great many we had 4,000,000 men taken out of production, and the wonder to me has been that we got along in the matter of production as fast as we did. There is no question that when the armistice was signed the airplane program was coming along pretty fast.

Mr. FREAR. In what particulars, outside of the DH-4's?

Gen. MENOHER. I mean in regard to the DH-4. I am not trying to defend it. I think that the DH-4 could be improved. I think the Liberty engine was very good, but I am not defending the air program at all; but I mean to invite attention to the element of time, which must be considered in anything having to do with the production of as complicated a piece of machinery as an aeroplane. I learned last night that in the Browning gun alone it took 13 months to get into quantity production.

Mr. FREAR. Some of these aeroplane factories had a large part of their force idle, according to the testimony placed before the committee. In one case the promised testimony will show 90 per cent of the full force in the Curtiss Plane Co. itself was idle a good share of the time. The testimony before the Thomas committee is that over 60 per cent of these men were idle. Now, the suggestion of some one was in answer to that that it was because they were waiting for orders; but the orders were not forthcoming and that was the difficulty. A Spad would be ordered, and then the order would be countermanded, and six months afterwards the order for the same Spad was countermanded another order would be put in force. The difficulty, contended in the Hughes report, as I gather, is that it was the policy of vacillation, which may have been due to personal interests. Here is the suggestion Mr. Hughes makes there: The Liberty motor which went into quantity production required one ignition system. It permitted none other. It is the only motor that requires that: not a single motor used in any foreign plane requires that system. That is true?

Gen. MENOHER. Yes.

Mr. FREAR. The Delco system came from Dayton, from Deeds, who had charge and who was a side partner of Talbott, and they were the ones that were getting all the contracts for the ignition system for this new motor that was being developed. Would it not seem probable that that effort to concentrate upon that one machine instead of manufacturing other machines and other planes, which was the safe course to pursue, would have the effect of delaying our program, and that that was the prime cause; it was not a question of waiting for other parts that are needed in a machine. In France, in England, and Italy they manufactured planes and engines and sold them to us constantly. We had to get them, because we made a pitiful showing: we only had 213 American planes, and those of obsolete type, on the front at the time of the armistice. So, is it not possible, and I say it is, because the committee is very much interested in ascertaining where we fell down so badly, is it not possible that the failure was largely due to their not beginning the production of other machines, such as were recommended by Gen. Foulois and Col. Clark and by the Bowling Commission, instead of concentrating everything on the Liberty motor? Gen. Squier himself said we cast the die for the Liberty motor, and he said he thought he made a good move, but our boys had no protection in Europe, except with foreign planes.

Gen. MENOHER. We felt on the other side—and I am speaking from the standpoint of men of the line—we felt that there was some mistake being made, that our Government concentrated on one thing and did not take the best ships in use over there and absolutely reproduce them here. That was the feeling that existed, and I know it existed in my division. While we felt that the people at home were behind us and were doing the best they knew how to help us out, we hoped that the aeroplane program would permit us to have a little better protection on the front line. We used to take our glasses—and this is an actual fact—and scan the sky for the sight of the billion-dollar plane that we hoped was coming.

Mr. FREAR. As Rickenbacher said when he looked at the DH-4 it was clumsy—I suppose with the idea of maneuvering—it was impossible to use for any fighting qualities.

Gen. MENOHER. It is not a fighting plane.

Mr. FREAR. And of course his criticism and his judgment ought to be as good as anybody's, and his criticisms were very severe as to it. We have digressed a little, but it is very important to have your view of the future of aircraft.

Gen. MENOHER. I have many other side lights on the whole subject, and I was prepared to go into it more fully later on, but I have a lot of notes in my hand.

Mr. FREAR. I believe the committee is open-minded on this subject, and if you have anything you care to submit to the committee as a whole, we would be glad to have you submit it.

Gen. MENOHER. I expected when the regular committees had hearings on this proposition for a separate Air Service that I would most probably be called and that is the reason why I did not make fuller notes at this time.

Mr. FREAR. Undoubtedly when the policy is determined you will be called. Of course ours will be a suggestion based on the testimony that we get from various sources.

Mr. LEA. I do not believe we have any clear understanding about those letters.

Mr. FREAR. They may be handed in as exhibits.

Gen. MENOHER. The whole correspondence should be on file, because it all has a bearing on the matter of the sales.

Mr. FREAR. Then that will be filed as an exhibit.

(The papers above referred to were marked "Exhibit No. 107" (Gen. Menoher).')

Gen. MENOHER. I would like to take this set and put it in proper shape so that it will be submitted and arranged in proper order.

Mr. FREAR. If we are gone when you file it you can file it with Chairman Graham of the general committee and the reporter will note that it is to be filed as an exhibit when it is received.

Gen. MENOHER. I will put a memorandum on of what the exhibit consists. I will probably be able to bring it here in the morning.

Mr. FREAR. All right.

Thank you, very much, General.

Maj. FOULOIS. I only want to make one suggestion and that is that I gather your investigation will ultimately have a recommendation attached to it.

Mr. FREAR. We have not yet decided what we will do on that point. It will depend on future action.

Maj. FOULOIS. The point that I wanted to bring up was this. I was more than pleased to hear Gen. Menoher bring out his statement. I have tried in the last 10 years in the aviation service to get everybody to express their opinion on this matter, and endeavor to help the flying men in solving the military problems, and I honestly hope that Gen. Menoher will call upon all the flying men to express their opinions frankly. In France while I was still brigadier general I made my expressions of opinion without fear of demotion or anything else. After 21 years' service there is no human being in the Army to point to one single instance where I have failed in loyalty to my superior officers, and as I say I brought the matter out over there fearlessly without fear of demotion, and I am perfectly ready to go on to-day giving the benefit of the experience I have had, the oldest flying man

¹Exhibit referred to not submitted.

in the service in the Army to-day, with 21 years' experience of all kinds in the United States Army. I am ready to put that service to the benefit of the Government. That has been my attitude for 21 years in the United States Army, and there is no doubt that Gen. Menoher's remarks did not apply to me, because I think he knows now of my record, and his remarks as regards promotion, I think, he did not mean to apply to me. There are a great many officers who think of nothing but promotion. I think 90 per cent of the officers in the Regular Army put their personal ambitions ahead of their duty to the Government, and that is why I have come before you. and it is immaterial to me what the decision may be in regard to my saying what I think. When I am under oath I will say what is the truth, and I honestly hope that when the question of a separate air service comes up the flying men, who risked their lives for years and years in this manner, will have a right to talk and have a right to get up and express their opinions.

I thought this over for two or three years and I wish to say right now that I am prepared to submit an argument, either before this committee or any committee that takes this question up, that in my opinion those men should not be held blameless who are responsible for the Air Service, and for the last eight or nine years the blame has rested with the governing authorities of the United States Army; the governing authorities of the War Department, and the governing authorities of the United States Army are the General Staff. I am prepared at any time to sit down and give my opinion as based on the results of 21 years' service in the Army and 11 years in the Aviation Service, that the General Staff in the last five or six years can not point to one single instance of a General Staff officer who has had anything constructive to do with the development of aviation to-day. I have insisted that they should give aviation precedence. The Chief of Staff in his testimony before the House Appropriations Committee said it was a fourth arm and should be put on a level with the other branches of the service, and that is the first announcement of an opinion that I have seen in 11 years of aviation duty, and I hope they will keep it up. For 11 years they have done nothing while we have been trying to get an Air Service policy, and that is the first announcement I have ever seen.

Mr. FREAR. I will say this, General, that so far as that is concerned I know the committee will be glad to get any information. What its action may be, of course, is problematical. As to any recommendation regarding the future, we do not care to assume jurisdiction we can not possess, unless the information should be desired.

I will say, in addition to that, any man who has been in the service and who wears the gold chevrons no one who has not been in the active service under similar conditions has a right to criticize him, and we will accept his judgment as of great value. I believe we are all inclined to do all we can for the benefit of the Air Service.

Maj. FOULOIS. One more point is this, as I said before, there is no officer under whom I have served who can rightfully accuse me of disloyalty or insubordination. While I have disagreed on many points, whatever thing I have been ordered to do in a certain manner I proceeded to do as directed; and I want Gen. Menoher to feel that in all this work it is my very earnest desire to assist him, and I know

how much he needs assistance over in that department, and how greatly he needs the loyalty and faithfulness of those under him.

Mr. FREAR. We certainly need all the assistance we can get on this problem, and we are glad to get it from every source, I am sure, and will weigh it carefully.

Gen. MENOHER. I just want to say this, that I had absolutely no reference to Maj. Foulois or to any other officer when I made the statement that perhaps a small element were in the service who were perhaps looking for their futuer advancement, etc. That had nothing to do with Gen. Foulois.

Mr. FREAR. That carries out my statement, that the man with the gold chevrons—and I speak of that because of the fact that a good many people I know wear them, including both Gen. Foulois and yourself—no one is in a position to question the judgment or the fairness in such matters so far as sincerity and real value goes. We can determine the weight after all parties have been heard and know the full value of your own judgment in the matter.

Mr. LEA. Then the understanding is that Gen. Menoher and Maj. Foulois will appear here at 10 o'clock in the morning.

Mr. FREAR. Yes; for a brief time.

Mr. LEA. I just wanted to complete my examination.

Mr. FREAR. Yes; that will be our purpose. The committee will now adjourn until 10 o'clock to-morrow morning.

(Thereupon, at 4.40 o'clock p. m. the committee adjourned to meet to-morrow, Friday, August 8, 1919, at 10 o'clock a. m.)

SUBCOMMITTEE NO. 1 (AVIATION) OF THE
COMMITTEE ON WAR EXPENDITURES,
HOUSE OF REPRESENTATIVES,
Friday, August 8, 1919.

The subcommittee met at 10 o'clock a. m., Hon. James A. Frear (chairman) presiding.

Mr. FREAR. In view of the testimony of Gen. Menoher on yesterday in regard to the Curtiss airplane contract I desire to enter into the record a letter sent by the chairman of this subcommittee to-day to Hon. Newton D. Baker, Secretary of War, which reads as follows:

AUGUST 8, 1919.

Hon. NEWTON D. BAKER,
Secretary of War, Washington, D. C.

DEAR MR. SECRETARY: At the hearing when you recently testified before our subcommittee, it is my recollection that you stated you had given orders or directions for the sale of Government motors and airplanes to individual purchasers at the same price that has been paid by the Curtiss Co., to wit: Four hundred dollars for the Curtiss JN-4, \$200 for the Standard J-1, and \$400 for the OX-5 motors.

The matter was presented before our committee yesterday in the discussion with Gen. Menoher, of the Curtiss airplane contract, where \$20,000,000 of Government material had been sold to the Curtiss Co. for \$2,700,000. This was without advertisement of sale as authorized by law either in small or large parcels, so far as the testimony goes. Gen. Menoher stated he has received no orders or instructions, and would be opposed to individual sales on the ground that it might injure the lives of pilots and others who might thus secure possession of a machine. His position was stated frankly, and there is no uncertainty as to his own idea. His testimony further discloses that he believed any sales in the future should be made to the Curtiss Co. rather than to pilots and other would-be purchasers.

This is entirely different, as I understand, from your own position. Gen. Menoher admitted that under the provision which may declare further surplus in aircraft contracts, the contract could be canceled by either of the parties upon such declaration by the Government. This gives the Government the right to cancel the Curtiss contracts, if the department chooses to declare any further Curtiss airplane material surplus. I am calling your attention to the following offers received from would-be purchasers, which I am informed are contained in the records of the Air Service Bureau.

Seven hundred and fifty-six inquiries have been received by the Air Service for a total of 1,102 Curtiss and Standard planes. Requests came from 169 qualified flyers, others may be included but did not so sign themselves. No public advertisements were ever given for such sales, as authorized by law. The inquiries concerning offers for Standard planes reached from \$100 to \$600 without motors. The Standard was sold the Curtiss Co. in quantity for \$200. The OX-5 motor also was sold to the Curtiss Co. at from \$200 to \$3,000. The general average of offers for the Curtiss plane is \$1,600. Over 11,000 accredited flyers were shown to have qualified at the time of the armistice. Among the bids offered were those received from transportation companies and aviation schools, which organizations it has been urged would do much to advance aviation in the country.

It is apparent that if any considerable sales can be made at the prices quoted, the pilots who have done their part during the war should be given some recognition. They are to-day obliged to buy from the Curtiss Co. for \$5,000 or \$3,500 for used machines, which were sold to the Curtiss Co. by the Government for less than 15 per cent of that amount.

The point that the Government should be called upon to guarantee the lives of men is of questionable merit, under all circumstances, in view of the fact that the

Gen. MENOHER. Yes, sir.

Mr. LEA. Some gentleman here the other day told me that a considerable number of these planes purchased by the Curtiss Co. were to be torn down and were not to be sold as completed planes. Do you know anything about that?

Gen. MENOHER. I do not, but I should say that most probably, that is almost certainly the case because our planes have to be overhauled from time to time and planes in storage have to be examined and have been cut into in the fabric to see that the woodwork is intact. There is a great deal of glue in the construction and parts would be needed for the repair of others.

Mr. LEA. I presume there are a good many different machines represented in the total number disposed of.

Gen. MENOHER. We even sent planes to Europe without engines in order that the plane parts might be used as spares.

Mr. LEA. Day before yesterday I called for certain information. Are you prepared to furnish that information.

Capt. SEATON. The information was delivered to Mr. Frear, and his secretary took it over to his office.

Mr. LEA. I wanted to get that into the evidence before we left if I could. In the first place I wanted the number of engines, airplane engines, produced in the United States during the war.

Capt. SEATON. Unfortunately the only copy of that information was delivered to Mr. Frear. We can get it for you in a few minutes.

Mr. LEA. Please give me the number of types and total number of planes of American manufacture available to the A. E. F. on June 30, 1919, so arranged to show separately those in the zone of advance and those in the rear.

Capt. SEATON. Do you wish those figures by word of mouth or simply insert that statement in the record?

Mr. LEA. If it is agreeable to you, I will just give this sheet to the reporter. The reporter can insert this exhibit under its proper number.

(The exhibit referred to is here printed in full, as follows):

Number of types and total number of planes of American manufacture available in the A. E. F. on June 30, 1919, so arranged to show separately those in the zone of advance and those in rear:

Location.	Types.				Total
	D. H.-4.		Le Pere.		
	I. C. ¹	O. C. ²	I. C. ¹	O. C. ²	
Zone of advance.....	22	141			163
Rear:					
Orly.....			1	1	2
Romorantin.....	116	59			175
Grand total in A. E. F.....					340

¹ I. C., in commission.

² O. C., out of commission.

As of May 21, 1919.

Source, Twenty-ninth Weekly Progress Report, A. E. F.

Mr. LEA (continuing). Now, gentlemen, I presume this record of machines available to the A. E. F. June 30, 1919, represents what remains after the disposal or transfer of a good many machines.

Gen. MENOHER. Yes; only the force on the Rhine was operating on the 30th of June, 1919.

Mr. LEA. In other words, the Air Service had been largely demobilized as well as other forces?

Gen. MENOHER. Yes; almost completely demobilized.

Mr. LEA. Please state the number of engines, planes, and airplanes which have been received by the A. E. F. from the Allies (showing source) at the time of the armistice and similar data showing the total number of each contracted for at the time of the armistice (with Allies).

Gen. MENOHER. I have here a statement which covers the answer to that question.

Mr. LEA. The reporter will place in the record this statement under its appropriate exhibit number.

(The statement referred to is here printed in full as follows:)

	Planes.		Engines.	
	Ordered.	Delivered.	Ordered.	Delivered.
French.....	Z 14,954	4,791	Z, Y 14,113	X 6,327
British.....	W 488	261	V 349	X 249
Italian.....	20	19	151	169

Z—1,125 planes and engines for fourth-quarter training program are included which were not formally contracted for with French.

Y—1,300 Breguet 14-B2 planes were to take Liberty engines made in United States.

X—Delivered to Nov. 14, 1919, figure to Nov. 11 not available.

V—200 S. E. 5 planes were to take Hispano-Suiza engines from United States.

Authority:

Ordered, status of all orders for airplanes and motors, A. E. F.

Delivered, armistice edition, Weekly Progress Report, A. E. F., as corrected by letter of May 3, 1919, from assistant C. A. S., A. E. F.

Mr. LEA. Referring to this statement, General, I see a plane referred to as "Z," and then giving the number.

Gen. MENOHER. That refers to the footnotes.

Mr. LEA. The footnote refers to the fourth-quarter training program. When was that program agreed on?

Gen. MENOHER. Capt. Seaton tells me it was not agreed upon.

Capt. SEATON. It so states. That was our program of training for the fourth quarter. Those are our wishes as expressed, but the French never formally accepted the contract. A note was made that those were not contracted for.

Gen. MENOHER. This gives the number of orders, French, British, and Italian, the number delivered, with certain footnotes in explanation. As I understand it, the training program was not fully carried out. This number ordered here included all that were ordered on contract and verbal agreement, but the program for this last quarter, which was up to the fourth quarter of last year, was not fully accepted by the French and they were not delivered.

Mr. LEA. No actual agreement was made concerning the program with the French?

Gen. MENOHER. I understand not.

Mr. LEA. Part of these machines were ordered, but the French never actually agreed to deliver them.

Gen. MENOHER. Yes.

Mr. LEA. But this does represent the total number delivered by France to the United States of airplanes during the war.

Gen. MENOHER. Yes.

Mr. LEA. State what the total number delivered by France was?

Gen. MENOHER. The total number delivered by France was 4,791; from the British, 261; and from the Italian, 19.

Mr. LEA. So that the total airplanes delivered to the United States by the Allies during the war was what sum?

Gen. MENOHER. Five thousand and seventy-one.

Mr. LEA. What was the total number of engines delivered to us by the Allies during the war?

Gen. MENOHER. There were 6,745 engines delivered.

Mr. LEA. I wish you would now deliver to the committee the information you have prepared showing the number of planes delivered and the types, by purchase, lease, or gift, from the Allies during the war.

Gen. MENOHER. The totals are, as of June 30, 1918, 1,984 training. 417 service; total, 2,401 planes. As of November 11, 1918, training. 2,605; service, 2,186; total, 4,791 planes from the French.

Mr. LEA. These service planes included both bombing and pursuit planes, did they?

Maj. FOULOIS. The Breguet was an observation and bombing type. The Nieuport is a fighting type. The Salmson was an observation and used solely for observation. The Breguet 14B2 is an observation type, also principally used for bombing. The Nieuport 28 is a fighting type. The Salmson is a foreign army observation type. The Spads are of fighting type.

Gen. MENOHER. The observation planes and the Spads, which were the largest number, were fighting types.

Mr. LEA. The reporter will mark this exhibit with its appropriate number for the record.

(The exhibit referred to is printed in full, as follows:)

Question No. 12. Number and kinds of planes furnished American troops by foreign Governments by purchase, lease, or gift for training and battle purposes at three dates last mentioned. If any were obsolete or discarded by foreign Governments on dates used by American troops, give number and kind.

Answer.

Airplanes received by United States Air Service from French Government to Nov. 11, 1918.

[Delivered by French Government to dates below.]

	June 30, 1918.	Nov. 11, 1918.
TRAINING PLANES.		
A. R. I and II.....	88	138
Breguet E2.....	51	98
Caudron G-3, G-4, R XI.....	168	203
Farman F40.....	8	32
Morane XXX.....	5	46
Nieuport 17, 21, 23, 24, 24B, 27, 80, 81, 83.....	1,235	1,430
Rouleurs.....	142	142
Sopwith A2, B2.....	279	504
Spad XII and XVI.....		2
Voisin VIII.....	8	10
Total training planes.....	1,984	2,605
SERVICE PLANES.		
Breguet 14 A2, 14 B2.....	40	263
Nieuport 28.....	176	208
Salmson 2 A2.....	76	649
Spad VII, XI, XIII.....	125	1,066
Total service planes.....	417	2,186
Grand total.....	2,401	4,791

June 30, 1917, no airplanes delivered.

Airplanes received by United States Air Service from British Government to Nov. 11, 1918.

[Delivered by British Government to dates below.]

	June 30, 1918.	Nov. 1, 1918.
TRAINING PLANES.		
Avro.....	0	50
B. E. 2E.....	0	12
Curtiss JN4.....	0	10
Total training planes.....		72
SERVICE PLANES.		
D. H. 9.....	0	1
F. E. 2B.....	0	28
S. E. 5.....	0	29
Sopwith Camel.....	15	126
Sopwith Dolphin.....	0	5
Total service planes.....	15	189
Grand total.....	15	261

June 30, 1917, no airplanes delivered.

Airplanes received by United States Air Service from Italian Government to November 11, 1918 (delivered by Italian Government): Training, S. I. A., 19 received in February, 1918.

The airplanes used by American pilots were of identical types with those used by allied pilots during the same period of time and the percentage of the best and latest service types was higher in the American Air Service than in the French, from whom we purchased our airplanes.

Due to the shortage of airplane production in the world, both the Allies and the enemy found it necessary to use in inactive sectors airplanes that were not of the latest up-to-date type in order to reserve those of the latest types for active sectors. This use of airplanes not of the latest types was less frequent in the American Army than in other armies.

Attention is invited in this connection to the fact that when new airplanes were produced and had actually been tested, that it took at least a year or more to replace in quantity the out-of-date types by the latest types. Furthermore, by the time these latest types reached the front, it was often the case that some newer type had been developed and that plans were on foot to replace all airplanes by the latter type.

Officers who will certify: Cedric E. Fauntleroy, major, Technical Section, American Expeditionary Forces (flyer); Averil Tilden, chief, Airplane Motor Division, American Expeditionary Forces (discharged); J. W. Satterfield, major, assistant chief supply, American Expeditionary Forces (flyer) (discharged).

Authority: Armistice edition report on Progress of Air Service, part 2, page 20; also, tables accompanying letter from Chief of Air Service, American Expeditionary Forces, dated May 3, 1919, to Director of Air Service, Washington, D. C.

Gen. MENOHER. There were received from the British Government as of June 30, 1918, no training planes and 15 service planes. As of November 11, 1918, there were received 72 training planes, 189 service planes, a total of 261 planes on November 11.

Mr. LEA. The service planes delivered by the British Government—did they include both fighting and bombing planes?

Gen. MENOHER. Yes, sir. There was only one D. H. type; F. E. 2B, Sopwith Camel, and Sopwith Dolphin.

Maj. FOULOIS. The D. H. 9, of which there was only one, is used for no service purpose. Its normal use on the front by the British was in connection with, chiefly, observation and a limited amount of bombing. The F. E. 2B is a second-rate bombing type formerly used for bombing until it was superseded by more advanced types. They were purchased by our Government primarily for use in night observation. The S. E. 5 is a fighting type and purchased by our Government for that purpose. The Sopwith Camel is also a fighting type and was utilized for fighting purposes. The Sopwith Dolphin is a fighting type and the few that we purchased were purchased for test and experimentation with the ultimate idea, if satisfactory, for our service, that an additional number would be purchased for fighting purposes.

Mr. LEA. We have covered the Italian, have we?

Gen. MENOHER. Here is the Italian. Of the S. I. A. there were 19 received in February, 1918, from the Italian Government; training planes, 19 of them.

Maj. FOULOIS. They were purchased for advanced training. They were very fast and very maneuverable machines and used primarily in our Air Service for advanced training camps.

Mr. LEA. Can you state at this time the total number of airplanes and engines available to the A. E. F. during the war; that is, machines and engines delivered both by the Allies and by the United States production for the use of the American force in Europe?

Capt. SEATON. We have given you the figures on planes received from foreign Governments to the date of the armistice. I can immediately supply the total planes received from the United States to November 16, or can later supply the number as of November 11.

Mr. LEA. The date is practically the same, so I wish you would give to the reporter the number supplied up to the 16th of November, 1918.

Gen. MENOHER. The total number is 1,321; American, United States.

Mr. LEA. That is, planes.

Gen. MENOHER. Yes.

Mr. LEA. Now, the number of engines?

Gen. MENOHER. This is to November 16, from the United States, 2,119, which includes 36 La Rhone, the remainder all being Liberty.

Mr. LEA. Does that include any planes or engines supplied to the Navy?

Gen. MENOHER. No, sir.

Mr. LEA. Do you at this time have the figures as to the number of engines and planes supplied the Navy during the war?

Gen. MENOHER. No, sir.

Mr. LEA. How soon can you furnish the reporter with the number of planes and engines up to November 11?

Capt. SEATON. It would take about an hour.

Mr. LEA. Suppose, if you can furnish those to-day, you give them up to November 11.

Capt. SEATON. Yes.

Bureau of Aircraft Production, statement of shipments from factories of all types of airplane engines for the United States Army during the 11-year period from 1908 to 1918, inclusive.

[Information obtained from records and correspondence in old Signal Corps files, contracts and expediting files, B. A. P., inspectors returns in history files, B. A. P.]

"EXPERIMENTAL" AND "OTHER TYPE" ENGINES.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1908 to 1916.										1916											
				1908	1909	1910	1911	1912	1913	1914	1915	Total to 1916.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for 1916.
1	Aero Club of Michigan.....	Hall-Scott.	Canceled.																						
6		Sturtevant.																							
32	Aeromarine Engine Co.....	do.																							
1	Bleakley, O. D.....	O X.	Canceled.																						
1		O X X-3.																							
30	Boeing Airplane.....	do.																							
6		O X-2.	Canceled.																						
32	Burgess Co.....	Twin motors.																							
1		Sturtevant.		do.																					
11		Christofferson.....	None delivered.				1	3	5			1	1	11			4	6							
4	Christofferson.....	O X-2.																							
10		do.																							
8		do.																							
8		do.																							
7		do.																							
3		do.																							
3		do.																							
4		V X.																							
4		do.																							
11		O X-2.																							
30		do.																							
27		V2-3.																							
30		O X-2.																							
36		V2-3.																							
10		O X-2.																							
4		O X X-3.																							
32		Curlew.	Canceled.																						
2		O X-2.																							
4		O X X-3.																							
26			2 canceled, 4 transferred to Navy, 7 undelivered.																						

"EXPERIMENTAL" AND "OTHER TYPE" ENGINES—Continued.

Digitized by Google

Bureau of Aircraft Production, statement of shipments from factories of all types of airplane engines for the United States Army during the 11-year period from 1908 to 1918, inclusive—(continued).

EXPERIMENTAL ENGINES FOR ENGINEERING DEPARTMENT, MCCOOK FIELD.

Quantity ordered.	Manufacturer.	Type.	(Quantity suspended or canceled.	1908 to 1916.							1916												Total for 1916.
				1908	1909	1910	1911	1912	1913	1914	1915	Total to 1916.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.		November.	December.
2	Hudson Motor Car Co.	Liberty model "B"																					
1		Liberty Geared																					
1		do.																					
1		Liberty																					
1		do.																					
1		do.																					
1	Packard Motor Car Co.	do.																					
1		do.																					
1		do.																					
1		Liberty cannon.																					
1		Liberty																					
1		do.																					
1		do.																					
1		do.																					
1	Thomas Morse Aircraft Corp.	do.																					
1		do.																					
1		do.																					
Total.																							

PROGRAM ENGINES.

Such engines as were determined upon to be placed in quantity production for training and combat service, after the types had passed through experimental and engineering stages.

1,000	Nordyke Marmoon Co.	A7a																						
1,250	Hall Scott Motor Car Co.	do.																						
Total A7a																								
400	Canadian Imperial Munitions Board	OX-5																						
	Borrowed from British order	do.																						
400	Curtiss Aero 4 Motor Corp.	do.																						
8,500	Willys-Overland, Willys-Motow.	do.																						
	Returned from Willys-Overland order	do.																						
	Returned on Irish loan.	do.																						
Total OX 6																								

(1)	Wright Martin.....	Hispano 150.....	{	3,250 suspended.....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
-----	--------------------	------------------	---	----------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

¹ A total of 8,500 Hispano-Suiza engines of either 150 horsepower or 180 horsepower type were ordered. The type was to be decided as needed, hence suspensions covers either type.

Bureau of Aircraft Production, statement of shipments from factories of all types of airplane engines for the United States Army during the 11-year period from 1908 to 1918, inclusive—Continued.

"EXPERIMENTAL" AND "OTHER TYPE" ENGINES.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1917												1918												Total to date of armistice signing, Nov. 11, 1918.	Grand total to Dec. 31, 1918.	Production by manufacturers.
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.			
1	Aero Club of Michigan.	(Hall-Scott.)								1						1												1	1	1
6	Aeromarine Engine Co.	Sturtevant.	Canceled.										2	4		6												6	6	6
32		do.										1																		
1	Bleakley, O. D.	OX-3.														1													1	7
1	Boeing Airplane Co.	OX-3.														1												1	1	1
30		OX-2.														2												2	2	2
6		OX-2.	Canceled.													2												6	6	6
32	Burgess Co.	Twinn motors.																												
1		Sturtevant.	do.																											
11	Christofferson.	Christofferson.	None delivered.																										11	47
10		OX-2.																											10	10
8		do.																											8	8
6		do.																											6	6
7		do.																											7	7
3		do.																											3	3
4		VX.																											4	4
8		do.																											8	8
11		OX-2.																											11	11
30		do.																											30	30
27		V2-3.																											27	27
30		OX-2.																											30	30
36		V2-3.																											36	36
60		OX-2.																											60	60
4		OX-2.																											4	4
47		OX-2.	Canceled.																										47	47
3		Sturtevant.																											3	3

[illegible]

[illegible]

"EXPERIMENTAL" AND "OTHER TYPE" ENGINES—Continued.

EXPERIMENTAL ENGINES FOR ENGINEERING DEPARTMENT, M'COOK FIELD.

2	Hudson Motor Car Co.	Liberty Model "B."	2	2	3
1	Peckard Motor Car Co.	Liberty	1	1	1
1		Liberty geared.			
1		do.	1	1	1
1		Liberty		1	1
1		do.		1	1
1	Peckard Motor Car Co.	do.		2	1
3		do.		3	3
1		Liberty cannon.		1	1
1		Liberty		1	1
1		Liberty		1	10

PROGRAM ENGINES.

[Such engines as were determined upon to be placed in quantity production for training and combat service, after the types had passed through experimental and engineering stages.]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1,000 Nordylte Mar- mon Co. A7a.....																		
1,250 Hall Scott Motor Car Co. 7a.....																		
400 Canadian Impe- rial Munitions Board. OX5.....																		
Borrowed from British order. do.....																		
Returned from Wil- lys-Over- land or- der. do.....																		
600 Curtiss Aero & Motor Corp. do.....																		
8,500 Willys-Overland Willys-Morrow. do.....																		
182 return- ed on British loan. do.....																		
Total OX5.....																		
(1) Wright-Martin... Hispano																		
(1) do..... Hispano																		
5,000 do..... Hispano																		
5,000 Pierce Arrow... do.....																		
Total Hispano no 300.																		
1,000 Nordylte Mar- mon Co. A7a.....																		
1,250 Hall Scott Motor Car Co. 7a.....																		
400 Canadian Impe- rial Munitions Board. OX5.....																		
Borrowed from British order. do.....																		
Returned from Wil- lys-Over- land or- der. do.....																		
600 Curtiss Aero & Motor Corp. do.....																		
8,500 Willys-Overland Willys-Morrow. do.....																		
182 return- ed on British loan. do.....																		
Total OX5.....																		
(1) Wright-Martin... Hispano																		
(1) do..... Hispano																		
5,000 do..... Hispano																		
5,000 Pierce Arrow... do.....																		
Total Hispano no 300.																		

Bureau of Aircraft Production statement of shipments from factories of all types of airplane engines for the United States Army during the 11-year period from 1908 to 1918, inclusive—Continued.

PROGRAM ENGINES—Continued.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1917												1918												Total for 1918.	Total to date of armistice signing, Nov. 11, 1918.	Grand total to Dec. 31, 1918.	Production by manufacturers.	
				Total for 1917.												1918																
				January.	February.	March.	April.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.						
342	Aero. Eng. Corp., Gen. Vehicle Co.	Gnome 100.	110 suspended.				2	23	18	5	3	9	60	15	2	41	1	36	6	66	3	1	1							172	222	232
48	Navy Department.	do.											48																	48	48	
	Total Gnome 100.						2	23	18	5	3	9	60	63	2	41	1	36	6	66	3	1	1							220	280	280
3,900	Union Switch & Signal Co.	LeRhône 80.	1,400 suspended.															14	54	159	96	345	309	337	439	1,752	1,057	1,752	1,057	1,752	1,057	
451	Excelsior Motor Mfg. & Supply Co.	Lawrence 28.														7	29	30	48		262	66	8	1		451	450	451	450	451	451	
2,200	Packard Motor Car Co.	Liberty 12.	5,600 suspended.									21	21	40	70	107	321	493	575	681	650	627	903	636	572	5,675	4,727	5,696	4,727	5,696	4,727	
7,000	Lincoln Motors Co.	do.	10,500 suspended.												15	94	127	344	464	761	687	1,050	818	1,109	5,499	3,772	5,499	3,772	5,499	3,772		
5,000	Ford Motor Co.	do.	1,650 suspended.																53	182	519	812	1,039	1,201	124	3,960	3,053	3,960	3,053	3,960	3,053	
5,000	General Motors Co.	do.	2,472 suspended.																130	226	325	177	658	424	151	1,991	1,570	1,991	1,570	1,991	1,570	
5,000	Nordylke Marmon Co.	do.	4,000 suspended.																	16	42	59	308	143	241	809	452	809	452	809	452	
	Total Liberty 12.											21	21	40	70	122	415	620	1,021	1,589	2,207	3,352	4,783	2,222	10,717	9,143	10,717	9,143	10,717	9,143	10,717	
2,000	Duesenberg Motors Corp.	Hupatt.	1,900 suspended.																													
	Total.																															
	Grand total produced in 11 years.																															

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive.

[Information obtained from records and correspondence in old Signal Corps files, contracts and expediting files B. A. P., inspectors' returns in history files B. A. P.]
 "EXPERIMENTAL" AND "OTHER TYPE" PLANES.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1908 to 1916.										1916											
				1908	1909	1910	1911	1912	1913	1914	1915	Total to 1915.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
6	Aeromarine Eng. Co.	Advanced training																							
16		Hydro.	Canceled.																						
1		L. W. F.																							
1	Bleakley, O. D.	Martin.																							
2	Boeing Airplane Co.	Primary training.																							
1	Breese, Sidney S.	Penguin.																							
11							1	3	5	1	1	11													
1		Seaplane	Canceled																						
6	Burgess Co.	Primary training.																							
32		Hydro.	Canceled																						
1		do.																							
2	Christofferson	Recon.	Canceled				3	1	3	4	11	22				8	8		4	2	1	2		16	
38		JN-4.																							
6		Advanced training																							
3		JN-4.																							
3		do.																							
6		do.																							
6		Recon.																							
36		JN-4.																							
16		R-4.																							
36		R-4.																							
36		Advanced training																							
4		Pursuit																							
16		Hydro.	Canceled																						
14		Twin JN.																							
1		N-9	6 transferred to Navy																						
1		JN-4.																							
1		R-4.																							
1		Twin JN.																							
2		JN-4 C.	Canceled																						
3	Curries Aero & Motor Corp.	Triplane																							
12		Model I.	11 canceled.																						

[illegible]

1810 note, page 512.

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive—Continued.

"EXPERIMENTAL" AND "OTHER TYPE" PLANES—Continued.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1908 to 1916.							Total to 1916.	1916												Total for 1916.	
				1908	1909	1910	1911	1912	1913	1914		1915	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.		December.
10		(R-6																							
3		(C-1																							
2	Navy, Secretary	N-9																							
168		Flying boats																							
2		do	Canceled																						
2	New York Aero Co.	Pursuit																							
2	Ordnance Engineering Co.	Side by side.																							
6	do	B-Scout																							
1	Philadelphia Aviation School	Hydro																							
2	do	Flying boats																							
2	Pigeon Fraser	Pursuit																							
1	do	do																							
4	Schaefer & Sons	(Standard																							
3		Recon																							
3		do																							
1		Pursuit	Canceled																						
18		Military training																							
32		Hydro	Canceled																						
1	Standard Aero Corporation	do																							
1		JR																							
6		M-Defense	4 canceled																						
5		JR-1																							
1		Caproni	Canceled																						
1		do	do																						
6		JR-1B																							
4		Caproni	2 canceled																						
2		Sturtevant																							
4		Seaplane																							
14	Sturtevant Aero	Advanced training	Canceled																						
5		do																							
1		Pursuit																							
1		Steel																							

[illegible]

EXPERIMENTAL PLANES FOR ENGINEERING DEPARTMENT, MCCOOK FIELD.

[illegible]

PROGRAM PLANES.

Such planes as were determined upon to be placed in quantity production for training and combat service, after the types had passed through experimental and engineering stages,

[illegible]

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1907 to 1918, inclusive—Continued.

PROGRAM PLANES—Continued.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1908 to 1916.											1916											Total for 1916.	
				1908	1909	1910	1911	1912	1913	1914	1915	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
680	Canadian Airplane Co.	JN4-D																									
2,400	Curtiss Aero & Motor Corporation.	JN4-D	399 suspended.																								
225	Fowler-Howell & Lesser Co.	JN4-D	100 suspended.																								
300	Liberty Iron Works.	JN4-D	do																								
975	Springfield Aircraft Corporation.	JN4-D	390 suspended.																								
650	St. Louis Aircraft Corporation.	JN4-D	200 suspended.																								
50	U. S. Aircraft Corporation.	JN4-D																									
	Total JN4-D.																										
929	Curtiss Aero & Motor Corporation.	JN4-H																									
1,035	do	JN6-H																									
100	Thomas Morse Aircraft Corporation.	84-B.																									
1,050	do.	84-C.	553 suspended.																								
200	Reese Aircraft Corporation.	Penguin.	332 suspended.																								
460	Standard Aircraft Corporation.	E-1.	1,900 suspended.																								
5,000	Dayton-Wright Airplane Co.	DeH-4.	2,400 suspended.																								
4,000	Fisher Body Corporation.	DeH-4.	360 suspended.																								
1,500	Standard Aero Corporation.	DeH-4.																									
	Total DeH-4.																										
2,000	Curtiss Aero & Motor Corporation.	Bristol Fighter.	1,973 canceled.																								
500	Various manufacturers.	Handley-Page	393 suspended.																								
1,064	Curtiss Aero & Motor Corporation.	SE-3.	999 suspended.																								
1,020	Lockard Motor Car Co.	Lucas-11	1,000 suspended.																								

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive—Continued.

[Information obtained from records and correspondence in old Signal Corps files, contracts and expediting files B. A. P., inspectors' returns, in history files B. A. P.]

"EXPERIMENTAL" AND "OTHER TYPE" PLANES.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1917												Total for 1917.	1918												Total for 1918.	Total to date of aircraft signing, Nov. 11, 1918.	Grand total to Dec. 31, 1918.	Production by manufacturers.		
				Total for 1917.													Total for 1918.																	
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.						
6	Aeromarine Eng. Co.	Advanced training.																																
16		Hydro.	Canceled.																															
1		L. W. F.																																
1		Martin.																																
2	Boeing Airplane Co.	Primary training.																																
1		Penguin																																
11	Breese, Sidney S.																																	
1		Seaplane																																
6	Burgess Co.	Primary training.	Canceled.																															
32		Hydro.	Canceled.																															
2	Christofferson.	Recon.																																
38		JN-4	Canceled.																															
6		do.																																
3		Advanced training.																																
3		Ing.																																
3		JN-4																																
6		do.																																
6		Recon.																																
26		JN-4																																
16		R-4																																
26		Advanced training.																																
1		Ing.																																
26		R-4																																
4		Pursuit.																																
16		Hydro.	Canceled.																															
1		Twin JN																																

[illegible]

1. "Experimental" planes: Those constructed for experimental purposes to enable Science and Research Department, Technical Section, and Engineering Departments to determine whether they would meet requirements and could be placed in quantity production. "Other types", planes constructed in comparatively small quantities. Some of these were used along the Mexican border by Gen. Pershing's forces during 1916. These planes can not be properly classified under the heading "Experimental", neither are they "Program" planes, because they do not come under the heading of the classification for service, such as the JN-4's, De Haviland 4's, or other types that were on the program for large quantity production. The type and construction of most of the planes appearing under the classification of "Other types" were such as to probably bring them under a title of "Training planes."

Bureau of Aircraft Production statement of shipments from factories of all types or airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive—Continued.

"EXPERIMENTAL" AND "OTHER TYPE" PLANES—Continued.

[illegible]

[illegible]

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive—Continued.

EXPERIMENTAL PLANES FOR ENGINEERING DEPARTMENT, MCCOOK FIELD.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1917												1918												Total to date of aircraft signing, Nov. 11, 1918.	Grand total to Dec. 31, 1918.	Production by manufacturers.	
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
1	Curtiss Aero & Motor Corporation.	(R-4)																													
3	Dayton Wright Airplane Co.	do.																													
2	do.	USD-9.																													
1	do.	do.																													
1	Fisher Body Corporation.	Caproni																													
1	do.	(Advanced airplane.)																													
1	Heinrich, A. S.	Pursuit.																													
1	do.	(Advanced airplane.)																													
1	Packard Motor Car Co.	LUSAC																													
1	do.	USAGH.																													
1	Wright - Martin Aircraft Corporation.	Leaning Monoplane.																													
Total.				1	3	2																									

[Such planes as were determined upon to be placed in quantity production for training and combat service, after the types had passed through experimental and engineering stages.]

Digitized by Google

Bureau of Aircraft Production statement of shipments from factories of all types of airplanes for the U. S. Army during the 11-year period from 1908 to 1918, inclusive—Continued.

PROGRAM PLANES—Continued.

Quantity ordered.	Manufacturer.	Type.	Quantity suspended or canceled.	1917												Total for 1917.	1918												Total for 1918.	Total to date of armistice signing, Nov. 11, 1918.	Grand total to Dec. 31, 1918.	Production by manufacturers.
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
5,000	Dayton - Wright Airplane Co.	DeH-4.	1,900 suspended.													9	4	15	153	336	480	124	518	556	504	200	2,899	2,383	2,899			
4,000	Fisher Body Corporation.	DeH-4.	2,600 suspended.																		4	98	203	502	567	227	1,599	999	1,599			
500	Standard Aero Corporation.	DeH-4.	360 suspended.																			4	36	39	1	9	89	79	89			
	Total DeH-4.															9	4	15	153	336	484	224	757	1,097	1,072	436	4,587	3,431	4,587			
2,000	Curtiss Aero & Motor Corporation.	Bristol Fighter.	1,973 canceled.															2	13	9	3							27	27	27		
500	Various Manufacturers.	Handley-Page.	383 suspended.																				80	20	2	1	103	101	103			
1,054	Curtiss Aero & Motor Corporation.	SE-5.	999 suspended.																			2			3	1	8	14	5	14		
1,025	Packard Motor Car Co.	Lusac-11	1,000 suspended.																					5	2			7	7	7		
2,000	Fisher Body Corporation.	Lusac-11	2,000 suspended.																													
500	Browster & Co.	Lusac-11	500 suspended.																													
	Total Lusac-11.																								5	2			7	7	7	
	Totals.																								5	2			7	7	7	
	Grand total produced in U. S.			33,252	3,204	81	124	225	902	354	173	1,407	714	714	952	702	702	700	1,156	719	1,212	1,657	1,803	862	11,899	11,964	12,468					

Mr. LEA. I wish you would now give me the information you have prepared as to American production of planes and engines during the war.

Gen. MONOHER. I have here charts which give by month and by manufacture the information desired in regard to both planes and engines.

Mr. LEA. I will ask that the reporter place these charts in evidence under their appropriate titles and exhibit numbers.

I wish you would kindly state the total number of engines produced in America during the war up to the 11th day of November, 1918. What is the total planes for that period?

Capt. SEATON. Airplanes delivered during the period of the war were 11,760 and engines for the same period, 30,630.

Mr. LEA. That is the American production?

Capt. SEATON. Yes, sir.

Mr. LEA. Can you give the total number of planes and engines made available, including domestic and foreign production, and deliveries during the war?

Capt. SEATON. The total number of planes delivered by the United States and by our allies to the American air forces was 16,831 and the total engines were 37,375.

Mr. LEA. General, have you the letters which you yesterday promised to arrange in chronological order and furnish for the record this morning.

Gen. MONOHER. Yes; I have them here. Included is a photostatic copy of the Curtiss Co. contract, with an inventory of the planes affected by the same.

Mr. LEA. I will now offer these letters in evidence and ask that the reporter mark them according to the appropriate exhibit numbers, and as I recall the understanding with Mr. Frear, the chairman, yesterday, it was that the contract should be placed with the committee but not ordered printed for the present, with the understanding that later any member of the committee could bring up the question of printing the contract.

(The contract referred to, and the series of letters referred to, were marked, respectively, "Menohar Exhibit No. 108" and "Menohar Exhibit No. 109," and are filed with the subcommittee.)

EXHIBIT No. 108.

CONTRACT FOR SALE OF MATERIAL.

This contract, made and entered into this 6th day of May, 1919, by and between the United States of America, by Maj. Gen. Charles T. Menohar, Director of Air Service, hereinafter called the contracting officer, acting under the direction of the Director of Purchase, Storage and Traffic, United States Army, and under authority of the Secretary of War, pursuant to the provisions of an act of Congress approved July 9 1918 (Public No. 193, 65th Cong., p. 9), of the first part, and the Curtiss Aeroplane & Motor Corporation, a corporation existing and doing business under the laws of the State of New York, and having an office for the transaction of business at No. 52 Vanderbilt Avenue, New York, N. Y., hereinafter referred to as the purchaser, of the second part: Witnesseth, that—

Whereas since April 6, 1917, the United States of America purchased from many different manufacturing concerns the aerial material hereinafter described; and Whereas the need for such aerial material has ceased the United States of America deems it expedient to dispose of same to the best advantage; and Whereas the purchaser desires to buy said aerial material;

Now, therefore, in consideration of the covenants, agreements, and conditions set forth herein to be performed by the parties hereto, the said parties have agreed, and by these presents do agree with each other, as follows:

1. The contracting officer does hereby sell to the purchaser, and the purchaser does hereby buy all the right, title, and interest of the United States of America in and to the following-described property, including such hand tools, radiators, propellers, and accessories, as shall accompany and form a part of such material: all subject to the conditions herein set forth:

(1) Four thousand six hundred and eight Curtiss OX-5 motors.

(2) One thousand six hundred and sixteen JN-4 Curtiss type aeroplanes, without motors.

(3) One thousand one hundred standard J-1 aeroplanes, without motors.

All of said aerial material is more particularly described, and its location given in the attached schedule marked "Exhibit A," which is hereby made a part hereof.

2. The purchaser shall pay for said aerial material a total sum of \$2,720,000, which sum is to be paid to the United States of America in monthly installments of not less than \$170,000 at Washington, D. C., between the 1st and 10th of each month, beginning with the month of July, 1919, except as to such material as may be taken during the month of May, 1919, which shall be paid for at the rates set forth in schedule following, between June 1 and 10, 1919. The total purchase price to be paid under the terms of this contract shall be paid on or before October 10, 1920. In order that the purchaser may receive physical possession of said material, and pay for the same, in greater amounts than is contemplated by the minimum monthly payments, an arbitrary unit value, as set forth in the schedule hereinafter to follow, has been agreed upon for such purpose only; therefore, on or before the 10th of the month following the receipt of physical possession by the purchaser of any such material, the purchaser shall pay for each motor and aeroplane so received an amount based on the value set forth in the following schedule, to wit:

For each OX-5 motor.....	\$400
For each JN-4 aeroplane without motor.....	400
For each standard J-1 aeroplane without motor.....	200

but in no event shall the said monthly payments be less than \$170,000: *Provided further*, That if in any month such payments shall be in excess of \$170,000, the excess over and above such minimum monthly payments shall be credited on the minimum monthly payments due during any month or months following thereafter; it being the intent that the purchaser shall not be considered in default in payment under the terms of this agreement if, at any time, the total amount paid to the United States of America for such material equals the aggregate of all minimum monthly payments which may be due at any such time.

3. It is understood that said aerial material has been inspected by the purchaser, and is taken by it in its present condition without any warranty or representation by the contracting officer, or any representative or agent of the United States of America, as to its condition, and the purchaser hereby waives any and all claims against the United States of America because of any defects or damage to said property, or absence of tools or accessories therefor, existing at the date of the final approval of this contract; and the United States of America shall protect said material and maintain it in its then condition until it is delivered to the stations designated herein, excepting depreciation and the action of the elements.

4. Said material shall be collected by the contracting officer at the following-named stations: March Field, Mather Field, Taylor Field, Wilbur Wright Field, Roosevelt Field, Love Field, and Aviation General Supply Depot, at Houston, Tex. It is understood that the Standard J1 aeroplanes, without motors, shall be collected at the supply depot at Houston, Tex., and no other planes or motors covered by this contract will be collected at this depot. The OX5 motors and Curtiss type aeroplanes covered hereby shall be collected at such of the above points, except Houston, as is most convenient for the contracting officer, having in view moving said material the shortest distance. The cost of loading on cars and shipping from any of the above-named stations shall be borne by the purchaser.

5. The contracting officer will set aside at each of the above stations, except Houston, at least five hangars in good condition, to be used for the purpose of holding the motors and aeroplanes covered by this contract, pending removal by the purchaser. It is hereby agreed that the purchaser will remove, on or before June 30, 1920, all material

covered by this contract situated at Mather, March, and Roosevelt Fields, or any of them, upon receipt of notice from the contracting officer to that effect, which said notice shall be given on or before May 31, 1920: *Provided, however, That the material remaining in the hands of the contracting officer shall at all times remain in approximately the proportions as provided for in paragraphs 10 and 11 following.*

6. The contracting officer agrees to use all reasonable diligence to deliver at the above stations as soon as practicable, and to as great an extent as storage facilities will permit, the planes and motors covered by this contract and as fast as the purchaser removes planes and motors from such warehouses, depots, and the like, it shall notify the contracting officer of such removal and of the quantity of material which it is desired that the contracting officer place in said warehouses for delivery to the purchaser. It is understood, however, that this contract shall not be construed to require the contracting officer to ship material to warehouses other than those nearest the station where such material is now located.

7. It is further understood that if at any time before any of the material covered by this contract has been shipped to one of the above-designated stations for delivery to the purchaser, the purchaser may notify the contracting officer of its desire to accept all or any amount of said material at its present location, stating the station at which said material is now located and the amount located thereat which it is desired to accept at such location; and such notice shall operate as an acceptance of said material by the purchaser, and shall have the same effect as though the material covered thereby was delivered to the stations above designated, and the contracting officer shall be relieved from the obligation of transporting said material to any of the above-designated points.

8. Title to said material shall pass to the purchaser upon delivery and no further responsibility shall attach to the United States in respect thereto. Delivery shall be evidenced by written receipt given by the purchaser to the contracting officer.

9. The purchaser agrees to remove from the said warehouses, depots, and the like at least one hundred and fifty (150) motors, and seventy-five (75) aeroplanes, contemplated in this contract, each and every month up to and including September, 1920, commencing with the month of June, 1919: *Provided, however, that the purchaser may take material during May, 1919, and pay therefor as hereinbefore provided: it being understood that all material covered by this contract must be removed by the purchaser on or before September 30th, 1920.*

10. Aeroplanes shall be classified, for the purpose of this contract, as follows:

Class 1, new JN4 D's.

Class 2, used JN4 D's.

Class 3, all JN4 A's, JN4 B's, JN4 Canadians.

Class 4, Standard J1's.

Of the aeroplanes delivered to the purchaser in any one month, not more than nine and six one-hundredths per cent (9.06%) shall be of class 1; not more than thirty-five and twenty-seven one-hundredths per cent (35.27%) shall be of class 2; not less than fifteen and sixteen one-hundredths per cent (15.16%) shall be of class 3; and not less than forty and fifty-one one-hundredths per cent (40.51%) shall be of class 4. *Provided, however, in any event the proportion of class 1 and class 2 aeroplanes shall be nine (9) of the former to thirty-five (35) of the latter.* It is the intention of this clause to provide that the average quality of Curtiss JN4 aeroplanes remaining in the hands of the contracting officer shall be at all times at least equal to the average quality of such aeroplanes at the date of this contract, natural depreciation excepted.

11. Of motors purchased by the purchaser in any one month, not more than fourteen per cent (14%) shall be new, and not less than eighty-six per cent (86%) shall be used. It is the intention of this clause to provide that the average quality of the Curtiss OX5 motors remaining in the hands of the contracting officer shall be at all times at least equal to the average quality of such motors at the date of this contract, natural depreciation excepted.

12. The purchaser shall have the right to operate or demonstrate any of the material covered hereby at the station where same is delivered: *Provided, That such operating and demonstrating shall involve no expense to the United States of America, and that the same shall in all respects conform to the rules and regulations in force at that time at such station.*

13. The United States of America shall, at its expense, crate and box for shipment all motors not in aeroplanes, and all planes necessary to be crated, in order to deliver same at collecting points. It is understood that the contracting officer has the right to fly aeroplanes to these points. The United States of America shall be under no obligation to crate and box aeroplanes and motors so delivered. The acceptance, in writing, by the purchaser of any of this material will be construed a waiver of any and all damages because of defective crating, boxing, and the like.

14. In the event any of the material covered by this contract may be lost or destroyed, through no fault of the purchaser, at any time prior to the time the purchaser takes actual possession thereof, deduction for the amount of the material so lost or destroyed shall be made from the total amount of the purchase price, in a sum based upon the schedule of valuation for such material set forth in paragraph two (2) herein: *Provided, however*, That cancellation shall be made as to such additional material as may be necessary to equalize the quality of material as provided in paragraphs ten (10) and eleven (11).

15. In the event the United States of America shall require the use of the material or any part thereof covered by this contract, either for itself or any of its political subdivisions, it is agreed that the contracting officer may notify the purchaser, in writing, of such fact, and specify in such notice said material then in the actual possession of the contracting officer, and as to same, such notice shall operate to divest all rights of the purchaser in and to the material specified therein, and covered by this contract, and deduction therefor at the rate hereinbefore specified for same, shall be made in the total amount due the United States of America hereunder. It is agreed, however, that as to any such material, the contracting officer shall elect to retain a pro rata share as to quality of both aeroplanes and motors as specified in paragraphs ten (10) and eleven (11).

16. As to all of said material that is not removed from the depots, warehouses, and other places of storage of the United States of America, on or before September 30, 1920, the purchaser's rights and interest therein shall terminate on said date, and no deduction in the amount due the United States of America shall be made by reason thereof.

17. In the event of failure on the part of the purchaser to substantially perform any of the terms and conditions of this agreement, in the time and in the manner herein specified, the contracting officer may, at his option, on 10 days written notice to the purchaser, after a default extending over a period of 10 days, declare this contract, and all its terms and conditions, canceled and annulled, and such notice shall be and is hereby given the effect of divesting all right, title and interest in and to any material covered by this contract, from the purchaser, which, upon the date of such notice, is in the actual possession of the contracting officer, and not heretofore paid for. It is understood that the failure to assert the right to terminate this contract shall not be construed as a waiver of any rights or liabilities hereunder.

18. Any claims, doubts, or disputes which may arise under this contract as to its performance or nonperformance, and which are not disposed of by mutual agreement between the parties hereto, may be determined, upon petition of the purchaser, by the Secretary of War.

19. The purchaser shall furnish to the United States of America within 20 days after the execution and delivery of this agreement, a bond in the sum of two hundred and fifty thousand dollars (\$250,000), conditioned upon the full and faithful performance by the purchaser of all terms, covenants, and conditions of this contract. Such bond shall be in the form and with sureties satisfactory to the contracting officer. Unless such bond is furnished within the time limit, this agreement may be canceled, at the option of the contracting officer.

20. If at any time during the period of this contract, additional Curtiss type aeroplanes or motors, or both, are declared surplus and available for sale, by properly constituted authority of the War Department, it is agreed that the contracting officer shall notify the purchaser of the number and location thereof. Upon receipt of such notice, the purchaser may give notice of the termination of the further performance of this contract, or, 30 days after said notice, unless the purchaser has agreed to buy such surplus material at a price and on such terms as are satisfactory to the Secretary of War, either party hereto may give notice of the termination of the further performance of this contract, provided such notice is given in writing and within 10 days after the expiration of the 30-day period mentioned above. Such notice of termination shall have the effect of cancelling this contract as to its unexecuted terms and provisions, except as to payments then due for prior deliveries: *Provided, however*, That such additional material shall be delivered and paid for thereafter, as may be necessary to equalize the material delivered under this contract as to quality as provided in paragraphs ten (10) and eleven (11) thereof.

21. This agreement shall extend to and be binding upon the legal representative, successors and assigns of the Curtiss Aeroplane & Motor Corporation.

22. Neither this contract nor interest therein shall be transferred by the purchaser to any other person, except as by statute provided.

23. The purchaser agrees, at all times, to do all things necessary to protect and conserve the best interests of the United States of America.

24. In the event there is conflict between paragraph one (1) and paragraphs ten (10) and eleven (11), paragraph one (1) shall control. It is understood that the purchaser

shall receive not more than 246 new JN4 D aeroplanes without motors, and not more than 644 new OX5 motors. A classification of the aeroplanes and motors described in Exhibit A shall be made after inspection by both parties, to definitely determine the number of new aeroplanes and new motors; and in the event it is found that more than 246 new aeroplanes, or more than 644 new motors, or both, are included in this exhibit, or that serial numbers are erroneously inserted, corrections shall be made, and other serial numbers inserted, so that not more than 246 new aeroplanes and 644 new motors are sold to the purchaser. A copy of the schedule showing this classification shall be filed with and become a part of this contract.

25. No Member of or Delegate to Congress or Resident Commissioner is, or shall be, admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not apply to this contract in so far as it may be within the operation or exceptions of section 116 of the act of Congress approved March 4, 1909 (35 Stats., 1109).

26. The term "Contracting officer," whenever used herein, shall be construed to mean the officer in whose name this contract is executed, his successor or successors, or any one who may be, from time to time, designated by the Director of Sales, or the Secretary of War, as contracting officer for Air Service material, and his or their duly authorized agent or agents who may be specifically delegated to perform the various functions herein attributed to the contracting officer.

In witness whereof, the parties hereto have caused this contract to be executed in quadruplicate the day and year first above written.

THE UNITED STATES OF AMERICA,
By CHAS. T. MENOHER,
Major General, United States Army, Director of Air Service.

Witness to signature of Maj. Gen. Chas. T. Menoher.

W. E. GILLMORE,
Colonel, United States Army.

CURTISS AEROPLANE & MOTOR CORPORATION,
By C. M. KEYS, Its Vice President.

Witness to signature of C. M. Keys, vice president of Curtiss Aeroplane & Motor Corporation.

F. H. HARRIS.

Recapitulation of Schedule A.

Fields.	JN-4 D's.		JN-1 A's B's, and Canadians.	Stand- ards J1.	OX-5 motors.	
	New.	Used.			New.	Used.
March.....	28	82	2			
Carruthers.....	18		66		35	
Kelly.....		50	149			
Call.....	25	98			27	
Selfridge.....						
Barron.....		49	42			
Tallas R. D.....			22			
Rich.....	45	91			64	
Love.....	26	62			45	
Brooks.....	32	75			32	
Tallaferro.....	2		15			
Wilbur Wright.....			13			
Gerstner.....		66				
Langley.....						
Hazelhurst.....		14				
Ellington.....			4			
Park.....			10		14	
Bolling.....		18				
Jorr.....						
Eberts.....	15	57			15	
Aberdeen.....		2				
Rockwell.....		2				
A. G. S. D., San Antonio.....					9	
A. G. S. D., Los Angeles.....					78	
A. G. S. D., Houston.....		15	20	1,100		
Souther.....			26		36	
Taylor.....	34	70	9		72	
Payne.....	13	69	33		21	
Scott.....			1		72	
Mather.....	8	105			6	
Chanute.....					24	
A. G. S. D., Little Rock.....					77	
Total.....	246	658	412	1,100	644	1,900

EXHIBIT A.

The following is a schedule of the property described in paragraph 1 of the foregoing contract. The property was at the places indicated on the date the inventories taken (about May 1, 1919), but same may be moved to another station for the convenience of the Government.

MARCH FIELD.

(261 OX-5 motors.)

Numbered as follows: 431, 972, 1443, 8046, 8497, 8804, 9147, 9413, 9500, 9749, 9800, 9846, 9981, 10032, 10059, 12674, 44874, 44880, 44890, 44897, 44903, 44912, 473, 1304, 1373, 1466, 1663, 1827, 2191, 8356, 8509, 8543, 9685, 9817, 9991, 12622, 44870, 3239, 8667A, 8751, 8874, 9734, 9822, 9848, 3019, 7957, 9980, 10024, 9100, 10030, 12567, 10043, 12595, 12700, 44881, 44888, 44896, 8079, 9158, 9658, 9921, 9967, 1141, 561, 466, 436, 448, 1099, 1664, 8084, 8524, 8837A, 9291, 9423, 9657, 9753, 9807, 9889, 9987, 10040, 10075, 12679, 44875, 44882, 44891, 44899, 44906, 44907, 853, 1305, 1375, 1483, 1752, 1840, 2263, 8375, 8511, 8559, 9695, 9830, 9998, 12662, 44878, 1303, 8715, 8744, 8887, 9778, 9832, 9852, 3915, 8101, 9984, 8706, 9360, 10033, 10017, 10378, 12605, 44871, 44884, 44889, 3206, 8244, 9203, 9671, 9923, 9974, 582, 559, 447, 470, 1152, 3228, 8206, 8555, 8840, 9312, 9461, 9663, 9773, 9820, 9896, 9989, 10052, 12575, 12697, 44876, 44883, 44894, 44901, 44908, 44909, 888, 1309, 1377, 1568, 1777, 1878, 2986, 8442, 8527, 8569, 9736, 9938, 9999, 12796, 44905, 1564, 8724, 8771, 8888, 9801, 9839, 9854, 3222, 8106, 10004, 8721, 9372, 12685, 10031, 12572, 12616, 44872, 44886, 44892, 3253, 8403, 9214, 9697, 9939, 1195, 569, 487, 444, 472, 1439, 7912A, 8493, 8787, 8849, 9398, 9572, 9737, 9798, 9836, 9902, 10005, 10054, 12653, 12699, 44879, 44885, 44895, 44902, 44916, 439, 1196, 1322, 1381, 1646, 1808, 1888, 3018, 8503, 8540, 8685, 9780, 9976, 10001, 40564, 44918, 1537, 8733, 8830, 8922A, 9808, 9843, 9863, 3236, 8257, 10019, 9062, 9442, 12553, 10039, 12608, 12695, 44877, 44887, 44893, 3218, 8606, 9344, 9882, 9951, 1160, 563, 468, 442.

(JN-4 Curtiss type aeroplanes, without motors, being 2 JN-4 A's, 110 JN-4 D's.)

The JN-4 A's are numbered as follows: 1241, 1445.

The JN-4 D's are numbered as follows: 47433, 47421, 39903, 39889, 47465, 39875, 47452, 39887, 47470, 5005, 4996, 4988, 3727, 3713, 3703, 3691, 1625, 3988, 3984, 3728, 3718, 3704, 3686, 3219, 2618, 1170, 235, 232, 47427, 39915, 39900, 39886, 39902, 47469, 47451, 39877, 39884, 5001, 4994, 3980, 3725, 3711, 3697, 3690, 1458, 3987, 3983, 3723, 3716, 3695, 3685, 3218, 1626, 1098, 229, 233, 47423, 39907, 39899, 39883, 39890, 47461, 39898, 39874, 5012, 5000, 4993, 3732, 3720, 3710, 3696, 3689, 3729, 3986, 3981, 3722, 3712, 3693, 3223, 3081, 1451, 3699, 154, 47422, 39905, 39896, 39881, 39880, 47453, 39893, 47473, 5007, 4999, 3992, 3730, 3717, 3706, 3692, 3687, 3989, 3985, 3731, 3721, 3707, 3688, 3221, 3068, 1444, 1620, 164.

AIR SERVICE FLYING SCHOOL, CARRUTHERS FIELD, FORT WORTH, TEX.

(178 OX-5 motors.)

Numbered as follows: 10093, 11435, 10612, 10505, 10693, 10710, 10944, 10665, 46596, 44933, 44947, 44967, 44994, 45014, 10227, 11967, 11164, 11242, 11878, 11925, 45000, 44960, 44997, 10920, 10070, 10921, 11786, 44985, 11871, 44923, 11141, 10255, 10170, 44963, 1756, 1411, 631, 872, 646, 876, 656, 588, 658, 715, 870, 11935, 10645, 11865, 10690, 10948, 10873, 10922, 45409, 12345, 44934, 44948, 44973, 44995, 45016, 11518, 11975, 11944, 11801, 11888, 11792, 10261, 44966, 45003, 10926, 10955, 10700, 12315, 11215, 11710, 44982, 10281, 44969, 10725, 9715, 1315, 9926, 722, 881, 882, 832, 864, 649, 985, 591, 515, 10671, 10542, 11676, 10566, 10908, 10792, 10472, 10924, 44926, 44931, 44961, 44976, 44996, 11220, 11952, 10168, 11369, 11698, 11942, 11978, 44977, 44974, 44992, 10897, 44965, 10723, 12337, 11969, 11714, 11306, 44923, 45010, 44941, 9636, 4821, 596, 732, 859, 522, 757, 731, 883, 858, 830, 11933, 10905, 10715, 10712, 11160, 10208, 10940, 45387, 44929, 44937, 44964, 44987, 45013, 11938, 11331, 11170, 11788, 11958, 11932, 44943, 45004, 44938, 10932, 10687, 10199, 10805, 44973, 11915, 11710, 11872, 44985, 40950, 44944, 1344, 4429, 628, 868, 555, 599, 523, 856, 723, 721, 874.

(JN-4 Curtiss type aeroplanes without motors, 66 JN-4 Canadians, 18 JN-4 D's.)

JN-4 Canadians are numbered as follows: 200, 210, 302, 311, 407, 411, 502, 508, 604, 611, 793, 1103, 1205, 1212, 1304, 1311, 39169, 211, 308, 312, 408, 412, 504, 509, 606, 448, 457, 1200, 1207, 1301, 1308, 3854, 39156, 204, 212, 309, 313, 409, 415, 505, 510, 607, 651, 1101, 1203, 1209, 1302, 1309, 38544, 39158, 205, 213, 310, 406, 410, 416, 506, 603, 609, 765, 1102, 1204, 1210, 1303, 1310, 39163.

JN-4 D's are numbered as follows: 5294, 5298, 5302, 5306, 5310, 5295, 5299, 5303, 5307, 5311, 5296, 5300, 5304, 5308, 5297, 5301, 5305, 5309.

KELLY FIELD, SAN ANTONIO, TEX.

(335 OX-5 motors.)

Numbered as follows: 445, 677, 419, 803, 798, 1830, 9290, 1824, 1154, 1500, 1535, 1694, 1796, 7923, 1650, 1438, 7932, 1651, 1143, 1348, 1522, 1640, 1711, 1837, 7991, 8303, 9163, 1147, 1144, 1355, 1525, 1670, 1725, 1855, 7996, 8026, 8090, 8288, 8469, 8579, 8727, 9197, 9295, 9888, 8027, 8091, 8296, 8477, 8592, 9056, 9200, 9298, 8008, 8051, 8115, 8303, 8500, 8609, 9155, 9233, 9393, 12886, 20334, 10507, 10823, 11204, 10381, 10686, 10841, 10201, 10430, 10770, 10973, 11288, 11883, 12714, 12733, 12811, 12717, 11840, 11973, 12722, 12750, 29447, 11805, 11956, 12720, 12748, 12899, 889, 796, 643, 432, 805, 1179, 9090, 8533, 1157, 1508, 1586, 1699, 1804, 7941, 1832, 9268, 9085, 1442, 1146, 1449, 1529, 1682, 1763, 2462, 8250, 8332, 1374, 1380, 1153, 1499, 1532, 1692, 1795, 7919, 7998, 8045, 8107, 8348, 8487, 8599, 9135, 9218, 9309, 8007, 8048, 8113, 8350, 8499, 8608, 9148, 9227, 9364, 8018, 8070, 8222, 8437, 8523, 8658, 9179, 9278, 9718, 10881, 10374, 10663, 10832, 10146, 10418, 10764, 10885, 10336, 10506, 10818, 11201, 11506, 11920, 12718, 12737, 12896, 11243, 11879, 12708, 12727, 12755, 45437, 11860, 12000, 12723, 12751, 45054, 332, 801, 778, 650, 1658, 9320, 8078, 1142, 1282, 1516, 1624, 1706, 1835, 7988, 9856, 9178, 1310, 1367, 1155, 1503, 1576, 1696, 1800, 7930, 8561, 9324, 1435, 8239, 1156, 1504, 1581, 1698, 1801, 7940, 8012, 8053, 8157, 8399, 8512, 8619, 9157, 9243, 9417, 8015, 8060, 8177, 8407, 8516, 8648, 9161, 9277, 9681, 8023, 8089, 8279, 8467, 8558, 8694, 9195, 9289, 9885, 40614, 10427, 10745, 10851, 10317, 10484, 10816, 11185, 10352, 10634, 10831, 11212, 11831, 11942, 12721, 12749, 12900, 11375, 11891, 12715, 12735, 12857, 11253, 11880, 12713, 12730, 12756, 45593, 606, 878, 797, 791, 8557, 9303, 7906, 1145, 1432, 1527, 1672, 1759, 1858, 8522, 1643, 1489, 8513, 1140, 1159, 1510, 1587, 1703, 1809, 7972, 1172, 1412, 1436, 1141, 1210, 1513, 1603, 1704, 1813, 7987, 8020, 8072, 8232, 8447, 8542, 8664, 9182, 9282, 9777, 8022, 8087, 8266, 8462, 8553, 8684, 9185, 9285, 9865, 8028, 8096, 8301, 8483, 8597, 9102, 9217, 9307, 10959, 10203, 10476, 10808, 11169, 10351, 10513, 10829, 1207, 10382, 10704, 10345, 11230, 11876, 12004, 12725, 12753, 45425, 11752, 11940, 12719, 12738, 12896, 11430, 11901, 12716, 12736, 12895.

(JN-4 Curtiss type aeroplanes without motors, 30 JN-4 A's, 7 JN-4 B's, 112 JN-4 Canadian's 50 JN-4 D's.)

The JN-4 A's are numbered as follows: 1441, 1314, 1271, 1618, 1586, 1448, 1534, 1280, 1449, 1537, 1286, 1307, 1653, 1452, 1557, 1533, 1454, 1584, 1443, 1513, 1279, 1623, 1589, 1627, 1610, 1450, 1549, 1501, 1311, 1149.

The JN-4 B's are numbered as follows: 133, 249, 246, 242, 257, 252, 241.

The JN-4 Canadians are numbered as follows: 38574, 39189, 39294, 39310, 39336, 39359, 39202, 39333, 40016, 39175, 39273, 39295, 39315, 39342, 39964, 39278, 39990, 40047, 39188, 39284, 39296, 39334, 39358, 39191, 39304, 39996, 39144, 39270, 39290, 39314, 39341, 39533, 39269, 39989, 40032, 39179, 39278, 39300, 39323, 39346, 39975, 39287, 39995, 39133, 39268, 39292, 39312, 39339, 38361, 39201, 39330, 40005, 39178, 39275, 39298, 39321, 39345, 39969, 39286, 39984, 40069, 39187, 39281, 39306, 39332, 39356, 39195, 39322, 40000, 39176, 39274, 39301, 39319, 39343, 39967, 39222, 39355, 40024, 39183, 39280, 39302, 39327, 39353, 39192, 39313, 39999, 39129, 39259, 39291, 39311, 39337, 39360, 39203, 39344, 40023, 29181, 39279, 39308, 39324, 39351, 39984, 39283, 39992, 40056.

The JN-4 D's are numbered as follows: 2450, 2651, 2857, 2644, 2759, 2608, 2732, 2875, 2878, 2886, 33929, 33930, 33924, 2530, 2712, 2453, 2654, 2858, 2650, 2851, 2899, 2900, 2901, 33934, 33935, 33932, 2602, 2722, 2546, 2713, 2528, 2711, 2864, 2925, 2944, 33918, 33919, 33885, 2609, 2733, 2607, 2731, 2549, 2719, 2868, 2871, 2873, 33922, 33923, 33920.

CALL FIELD, WICHITA FALLS, TEX.

(169 OX-5 motors.)

Numbered as follows: 10778, 10551, 11631, 11653, 11697, 11590, 11994, 11191, 10782, 11613, 11596, 45038, 10149, 10776, 10608, 45032, 10126, 11634, 11043, 10962, 11622, 10970, 10732, 46398, 46627, 10079, 10103, 10533, 10747, 11521, 11948, 10817, 11703, 9479, 9482, 1524, 3928, 9702, 8125, 9730, 9717, 9793, 9678, 11689, 10896, 11668, 10871, 10560, 10781, 11700, 10561, 10120, 10358, 10573, 11659, 45035, 10672, 10630, 10871, 10185, 11646, 10898, 11131, 10607, 10938, 10966, 46487, 46601, 10088, 10125, 10559, 10780, 11662, 10503, 10789, 11663, 9886, 9784, 9686, 9668, 9752, 9952, 9469, 9750, 9762, 12881, 10236, 11620, 45037, 10769, 10801, 10858, 10207, 10375, 10510, 11682, 10771, 10835, 11112, 10830, 11673, 10502, 10100, 10976, 10954, 10902, 10961, 11014, 46503, 46610, 10105, 10160, 10562, 10672, 11664, 10659, 11647, 11676, 1523, 8765, 9887, 9842, 9802, 8495, 9612, 9781, 9464, 11645, 1181, 10766, 11395, 10813, 11178, 11501, 10135, 10350, 11784, 10152, 10818, 10758, 10694, 11345, 11684, 10592, 45034, 10461, 10906, 11020, 10626, 10936, 46563, 10036, 10111, 10162, 10665, 11473, 11678, 10553, 10606, 9482, 9631, 1792, 9758, 9845, 9763, 9928, 9652, 9785, 9683.

(JN-4 Curtiss aeroplanes, type "D" without motors—123.)

Numbered as follows: 5185, 5154, 5186, 2685, 5099, 3873, 3878, 5177, 5168, 5157, 5139, 4012, 5209, 3879, 2890, 5041, 5109, 5044, 5127, 5091, 5126, 5205, 5211, 5105, 33787, 34170, 34188, 34192, 34200, 34204, 44346, 1285, 5086, 5089, 2726, 5213, 5040, 3883, 3887, 5092, 5203, 5133, 5030, 5031, 5098, 5206, 5083, 5045, 5046, 5143, 9237, 4020, 5204, 5207, 4038, 33788, 34171, 34189, 34193, 34201, 34205, 44347, 2757, 5042, 5095, 3880, 3228, 5084, 4036, 5128, 5217, 5123, 5087, 1606, 5189, 5124, 5219, 5013, 5144, 3882, 5178, 5100, 5176, 5208, 5140, 33785, 34168, 34172, 34190, 34198, 34202, 44342, 44348, 3227, 5190, 3733, 5102, 3877, 5166, 5167, 5090, 5218, 5142, 5187, 3874, 5125, 5156, 5215, 5152, 5094, 3884, 4022, 5097, 5163, 5048, 5188, 33786, 34169, 34173, 34191, 34199, 34203, 44345.

SELFPRIDGE FIELD, MOUNT CLEMENS, MICH.

(17 OX-5 motors.)

Numbered as follows: 1228, 1316, 7917, 9194, 12850, 1272, 1392, 8470, 9477, 1273, 1396, 8942, 9542, 1314, 1406, 9138, 9766.

BARRON FIELD, EVERMAN, TEX.

(179 OX-5 motors.)

Numbered as follows: 709, 609, 706, 487, 668, 438, 472, 442, 698, 694, 705, 619, 499, 689, 595, 450, 669, 8687, 8530, 9850, 8666, 8290, 44945, 10233, 10243, 10611, 11510, 45005, 10544, 11567, 10546, 44986, 45458, 10241, 10045, 44971, 10524, 10300, 10130, 45485, 45015, 46345, 12360, 11286, 46608, 446, 571, 670, 825, 617, 673, 680, 567, 615, 612, 660, 863, 885, 871, 524, 828, 8662, 8007, 8402, 1534, 8114, 8372, 10453, 10144, 11622, 11541, 11350, 11326, 10685, 10517, 10525, 11534, 11332, 10273, 45012, 11770, 11528, 46591, 45052, 44981, 10357, 10539, 10543, 12197, 10278, 455, 575, 710, 491, 718, 652, 449, 613, 475, 576, 819, 473, 497, 691, 436, 484, 9969, 8110, 8541, 9177, 9692, 1521, 10248, 11313, 11405, 10541, 10459, 10195, 46328, 11448, 11652, 11378, 45811, 12382, 46318, 10072, 11706, 45007, 10290, 11705, 10522, 12354, 10280, 44936, 10275, 693, 711, 603, 566, 456, 686, 687, 614, 699, 581, 478, 659, 563, 676, 826, 454, 8692, 8640, 1760, 1702, 8688, 11455, 10196, 11337, 46540, 10253, 10178, 46515, 11357, 11143, 10492, 10254, 10709, 11463, 12710, 10110, 11293, 10578, 10752, 45006, 10528, 44922, 46522, 10246.

(JN-4 Curtiss type aeroplanes without motors—42 JN-4 Canadians, 49 JN-4 D's.)

The JN-4 Canadians are numbered as follows: 770, 460, 654, 789, 811, 719, 766, 761, 355, 38575, 38549, 783, 471, 721, 763, 725, 771, 690, 682, 38578, 38538, 39160, 796, 731, 459, 794, 455, 456, 366, 354, 38560, 39184, 722, 378, 781, 726, 465, 343, 360, 411, 39126, 38542.

The JN-4 D's are numbered as follows: 5245, 3841, 3033, 1407, 5016, 1072, 5220, 1480, 1309, 44387, 44281, 44277, 44278, 5236, 2880, 1181, 5247, 5232, 3845, 1299, 3866, 3755, 44279, 44276, 44388, 5248, 3747, 4013, 5230, 1183, 1656, 1326, 1437, 3900, 44280, 44274, 44389, 3071, 5264, 5224, 1283, 3875, 2936, 5222, 1582, 44273, 44272, 44390, 44275.

AVIATION REPAIR DEPOT, DALLAS, TEX.

(JN-4 Curtiss type aeroplanes without motors—2 JN-4 A's, 20 JN-4 Canadians.)

The JN-4 A's are numbered as follows: 1138, 1374.

The JN-4 Canadians are numbered as follows: 714, 790, 809, 454, 723, 408, 786, 780, 769, 461, 712, 685, 812, 801, 38536, 412, 410, 732, 802, 38576.

RICH FIELD, WACO, TEX.

(JN-4 Curtiss type aeroplanes without motors—136 JN-4 D's.)

Numbered as follows: 3794, 3811, 3771, 5020, 3775, 3070, 3018, 5019, 5175, 3798, 3809, 3231, 3305, 3787, 3826, 3836, 2526, 3751, 3420, 5227, 5164, 2672, 3392, 44336, 34047, 34052, 34181, 34053, 44339, 34042, 44338, 34050, 34041, 44412, 4770, 3780, 5173, 5015, 5171, 3304, 3829, 5135, 3801, 3859, 4985, 5195, 5161, 1386, 5191, 3209, 2746, 3167, 5145, 5159, 3381, 3842, 3009, 34180, 34048, 34046, 44341, 34187, 44340, 33946, 44335, 44332, 44409, 44413, 5022, 3795, 5184, 5147, 3891, 3457, 5192, 3835, 3772, 3837, 5149, 5193, 3868, 3769, 2882, 3264, 2834, 3262, 5013, 1187, 5072, 3832, 5132, 33792, 33782,

33886, 34044, 44337, 34183, 34186, 34184, 34043, 44410, 44414, 3779, 3793, 5170, 3075, 2559, 5028, 3858, 3774, 5158, 5146, 4024, 5196, 3232, 5148, 5174, 2547, 3240, 5179, 3800, 2560, 5183, 3840, 3838, 33817, 33783, 34812, 34049, 44334, 34045, 34185, 34055, 44333, 44411, 34054.

(218 OC-5 motors.)

Numbered as follows: 10025, 10190, 10212, 10157, 11636, 11560, 45048, 10153, 11613, 11660, 11617, 45047, 11330, 10466, 10757, 46587, 10180, 10458, 10800, 46575, 10464, 11623, 46603, 10798, 11041, 10156, 46552, 12391, 10761, 11583, 10767, 11625, 45042, 11588, 12008, 10865, 10449, 10404, 11739, 11593, 10443, 11661, 11627, 12346, 8670, 9451, 8736, 8827, 9488, 8474, 1856, 9792, 9438, 8000, 9404, 10370, 10155, 10754, 10716, 10358, 11238, 11607, 11049, 10346, 10321, 11569, 10486, 10846, 45046, 11643, 12383, 10758, 10564, 10879, 46583, 46375, 10953, 10028, 11685, 46613, 10822, 46351, 10140, 10758, 11616, 10797, 10301, 10305, 11651, 11874, 10440, 10337, 10755, 11632, 11586, 11650, 11551, 11824, 9301, 9362, 8277, 9860, 9457, 8799, 8536, C799, 9975, 9359, 1819, R. F. No. 1, 45044, 10206, 46517, 10129, 10082, 10718, 45050, 11074, 10790, 10779, 10825, 12375, 11085, 12234, 10270, 11628, 11516, 10222, 10889, 46290, 11066, 11088, 12362, 11065, 10884, 46525, 66588, 10182, 45418, 10826, 12353, 12352, 11591, 11857, 11853, 11640, 10883, 45049, 11605, 11649, 10037, 10465, 11741, 9167, 8041, 9710, 9311, 8817, 9368, 1732, 8169, 9422, 1584, 8984, 10200, 10141, 10980, 10811, 10500, 45045, 12371, 10205, 11637, 11641, 11037, 10567, 11180, 10133, 12356, 10375, 10646, 10995, 46559, 10945, 10827, 46609, 11635, 46628, 10584, 46621, 46520, 10649, 11630, 10943, 10557, 11906, 11989, 10078, 10467, 11592, 10356, 10167, 12169, 12358, 11589, 10313, 10168, 1175, 9937, 1754, 9670, 9251, 9901, 9653, 9310, 8277, 9249, 9230.

LOVE FIELD, DALLAS, TEX.

(153 OX-5 Motors.)

Numbered as follows: 9615, 8554, 9869, 1531, 8225, 9788, 9727, 9882, 9350, 9611, 9647, 10240, 10633, 11099, 11199, 11602, 11611, 11108, 46499, 46508, 46546, 46501, 46339, 46600, 11744, 45477, 10479, 10598, 11976, 11665, 10844, 10210, 9680, 8166, 9455, 8147, 2857, 9997, 9995, 9741, 9835, 9851, 9911, 45056, 11382, 10428, 11648, 11135, 10396, 11123, 46557, 46514, 46492, 46498, 46362, 11863, 10527, 12364, 11078, 40585, 10545, 12370, 10615, 11626, 9777, 9724, 8417, 9635, 9755, 9827, 9841, 9348, 9748, 9687, 9679, 10062, 10408, 10595, 11172, 11621, 11148, 10122, 46507, 46577, 46433, 46554, 46265, 11057, 45484, 10012, 12348, 45490, 45081, 10101, 10968, 9814, 9654, 8077, 9319, 1391, 9790, 9906, 9983, 9858, 9849, 3145-Manne, 45029, 11699, 11576, 11398, 11606, 11077, 11105, 46506, 46570, 46502, 46294, 46352, 10570, 12879, 11046, 45058, 11016, 10023, 11104, 11056.

(114 JN-4 D Curtiss type aeroplanes without motors.)

Numbered as follows: 34179, 34224, 44250, 44254, 44258, 44372, 44377, 34012, 34025, 1290, 2449, 2893, 3007, 3238, 3828, 3854, 4002, 4027, 4037, 4046, 4051, 4064, 9647, 10010, 10615, 9992, 9838, 10008, 3119, 34221, 44247, 44251, 44255, 44259, 44373, 44397, 34013, 34174, 1436, 2629, 3898, 3084, 3261, 3831, 3856, 4008, 4031, 4040, 4047, 4055, 4066, 9121, 11059, 9879, 9958, 9961, 9968, 11056, 34222, 44248, 44252, 44256, 44260, 44374, 33789, 34017, 34175, 2419, 2655, 2973, 3092, 3310, 3847, 3861, 4017, 4033, 4044, 4049, 4057, 4072, 9849, 10861, 10011, 10009, 10020, 11725, 34223, 44249, 44253, 44257, 44261, 44376, 34011, 34019, 1108, 2424, 2705, 3974, 2146, 3749, 3848, 3865, 4023, 4035, 4045, 4050, 4063, 5088, 9874, 10107, 10000, 10013, 10027, 8574.

BROOKS FIELD, SAN ANTONIO, TEX.

(180 OX-5 motors.)

Numbered as follows: 8067, 8505, 8360, 8725, 8614, 8676, 8329, 8700, 10636, 10999, 46611, 10478, 11397, 10015, 11006, 10481, 10743, 10044, 11245, 10347, 10720, 10918, 10651, 10469, 1798, 8057, 8339, 8036, 8673, 8519, 8710, 11448, 10602, 10923, 46560, 11232, 12340, 10603, 10971, 69953, 10359, 11431, 11292, 10310, 10979, 69829, 10175, 11254, 8286, 8231, 8680, 1166, 8162, 1539, 8357, 10719, 10530, 10990, 11519, 11271, 11523, 10631, 10951, 46580, 12387, 12882, 11318, 10677, 10838, 29957, 10531, 11304, 1336, 8364, 8900, 8175, 8408, 8186, 8958, 10898, 10991, 69830, 11303, 11314, 11570, 10706, 46617, 46638, 10576, 10234, 10702, 10614, 10919, 46424, 10586, 11334.

The following engines have been transferred to Ellington Field on memorandum receipt: 10456, 45427, 45051, 10504, 11536, 10244, 8322, 1448, 8235, 8780, 8216, 8143, 8174, 8671, 8201, 11571, 10447, 10034, 12347, 10177, 10591, 9725, 8471, 8100, 1512, 8197, 8665, 8358, 1691, 10242, 10022, 10116, 11283, 11996, 7920, 8351, 8185, 8734, 9881, 8642, 8718, 9892, 8668, 11642, 12349, 11644, 10368, 10249, 8643, 8412, 8351, 8686, 8209, 8298, 8063, 8152, 8431.

Not transferred to Ellington Field: 11343, 11499, 11349, 11577, 11598, 11760, 1647, 11389, 10787, 11390, 45057, 11409, 11615, 8782, 11425, 10345, 11433, 11364, 11590, 10147, 8563, 11461, 11657, 11473, 11414, 11298, 8740.

JN-4 CURTISS TYPE AEROPLANES WITHOUT MOTORS.

(110 JN-4 D's.)

Numbered as follows: 3226, 2743, 5283, 5346, 3754, 1617, 5355, 2982, 3758, 5284, 5347, 44329, 44326, 44330, 3752, 3259, 5276, 5357, 5271, 5287, 5352, 3736, 3299, 5280, 5356, 44331, 44325, 3742, 5289, 5353, 3080, 3757, 5285, 5349, 3740, 3129, 5354, 40004, 44323, 44322, 1247, 5286, 5350, 3182, 5273, 5282, 5290, 5270, 5288, 5351, 44324, 44328, 44327.

The following planes have been transferred to Ellington Field, Houston, Tex., on memorandum receipt: 3056, 3744, 5122, 5275, 3258, 3769, 5133, 3254, 5017, 3759, 3055, 2869, 2972, 5278, 131, 3186, 3738, 5121, 3753, 3307, 1365, 4021, 5272, 3165, 5274, 1580, 2957, 3010, 33791, 3737, 3225, 3379, 3008, 3256, 3733, 2876, 2983, 3748, 3075, 3743, 3260, 5279, 39913, 2961, 2812, 2921, 3099, 5138, 3173, 4016, 5281, 3266, 2990, 2647, 3193, 5277, 118.

TALIAFERRO FIELD, HICKS, TEX.

(5 OX-5 motors.)

Numbered as follows: 46523, 46531, 46635, 69948, 69928.

JN-4 CURTISS TYPE AEROPLANES WITHOUT MOTORS.

(15 JN-4 Canadians; 2 JN-4 D's.)

JN-4 Canadians numbered as follows: 403, 401, 391, 495, 816, 402, 347, 655, 349, 345, 693, 684, 385, 344, 499.

JN-4 D's numbered as follows: 44292, 44293.

WILBUR WRIGHT FIELD, DAYTON, OHIO.

(15 OX-5 motors.)

Numbered as follows: 9305, 9140, 9380, 46341, 9286, 1687, 9328, 69955, 1290, 9336, 12101, 46292, 9447, 9207, 10398.

JN-4 Curtiss-type aeroplanes without motors: 1 JN-4A, 1 JN-4B, 11 JN-4 Canadian's.

The JN-4A is numbered as follows: 1499.

The JN-4B is numbered 2.

The JN-4 Canadian's are numbered as follows: 39329, 39338, 39307, 39320, 39282, 39342, 39331, 39354, 39285, 39303, 39325.

GERSTNER FIELD, LAKE CHARLES, LA.

(103 OX-5 motors.)

Numbered as follows: 1204, 1333, 7909, 8237, 8743, 8757, 1731, 7918, 8156, 8264, 8384, 8748, 8346, 8251, 8419, 8248, 8052, 8783, 1195, 8142, 8219, 8423, 8767, 9761, 12892, 12876, 1239, 1337, 7924, 8240, 8502, 9633, 8173, 8095, 8188, 8267, 8406, 8766, 8596, 8323, 8220, 8386, 8291, 8812, 1197, 8187, 8297, 8443, 8797, 8472, 11291, 12851, 1242, 1496, 8098, 8313, 8532, 8191, 8385, 8183, 8199, 8363, 8415, 8792, 8315, 8234, 8278, 8149, 8365, 8431, 1707, 8203, 8321, 8451, 9616, 11058, 12771, 12873, 1293, 1769, 8226, 8319, 8756, 1245, 8515, 8148, 8246, 8375, 8460, 8228, 8489, 8317, 8333, 8803, 8229, 8314, 8081, 8204, 8401, 8753, 9669, 12746, 12848.

(JN-4 Curtiss aeroplanes, type D, without motors—66.)

Numbered as follows: 3037, 3011, 3018, 3179, 3268, 3281, 3292, 2668, 2774, 2991, 3022, 3108, 3212, 3002, 3136, 3014, 2766, 2956, 2996, 3122, 3248, 3274, 3283, 3297, 2673, 2950, 3124, 3105, 3015, 3064, 2678, 3213, 3065, 3156, 2989, 3013, 3123, 3252, 3276, 3288, 2598, 3680, 3103, 3171, 3106, 3206, 2992, 2592, 2768, 3289, 2995, 3016, 3176, 3267, 3279, 3291, 2666, 2737, 2661, 2988, 2736, 3019, 2994, 3189, 2772, 3017.

LANGLEY FIELD, HAMPTON, VA.

(8 OX-5 motors.)

Numbered as follows: 10302, 8256, 10446, 1332, 12334, 1261, 12336, 678.

HAZELHURST FIELD, MINEOLA, LONG ISLAND, N. Y.

(JN-4 Curtiss type aeroplanes without motors.)

14 JN-4 D's numbered as follows: 2832, 3409, 3467, 3486, 2913, 3430, 3474, 3494, 2964, 3463, 3476, 3407, 3465, 3483,

113 OX-5 motors, numbered as follows: 10029, 10319, 10376, 10515, 10540, 9215, 9250, 9270, 9306, 9343, 9369, 9409, 9432, 9449, 9510, 1335, 8627, 8782, 8813, 8929, 8962, 9005, 9039, 9064, 9097, 9125, 9151, 9169, 9204, 10267, 10324, 10393, 10516, 10556, 9232, 9253, 9275, 9322, 9346, 9386, 9416, 9437, 9450, 9542, 1451, 8708, 8795, 8831, 8933, 8977, 9010, 9047, 9067, 9198, 9128, 9152, 9193, 10299, 10326, 10399, 10534, 10675, 9238, 9254, 9293, 9330, 9361, 9391, 9424, 9441, 9460, 9544, 5738, 8709, 8798, 8873, 8934, 8989, 9032, 9057, 9083, 9212, 9130, 9159, 9196, 10308, 10365, 10413, 10538, 10701, 9242, 9258, 9294, 9339, 9367, 9401, 9426, 9444, 9465, 9547, 7992, 8755, 8811, 8928, 8940, 8991, 9034, 9058, 9084, 9107, 9143, 9162, 9202.

ELLINGTON FIELD, HOUSTON, TEX.

(111 OX-5 engines, 3 JN-4 A's, 1 JN-4 Canadian.)

The JN-4 Canadian is numbered 39170.

The JN-4 A's are numbered as follows: 1373, 1375, 1601.

The OX-5 engines are numbered as follows: 40615, 12780, 40563, 12789, 10965, 12823, 40580, 10340, 10409, 10369, 1780, 1468, 7978, 1323, 9685, 1176, 7969, 1601, 1246, 1599, 8421, 3461, 8349, 1794, 8425, 8002, 1386, 8282, 40600, 12784, 40586, 40566, 12823, 12817, 12828, 10354, 12821, 7963, 7938, 6468, 1182, 8491, 1595, 8454, 1177, 1778, 1329, 1776, 8458, 9978, 1457, 8496, 8335, 8119, 1567, 9986, 40602, 40616, 10384, 10362, 12806, 12702, 40582, 12792, 12826, 1805, 1179, 8610, 7974, 1291, 7952, 7951, 8222, 1749, 8376, 9994, 1460, 8438, 1746, 7994, 1184, 1775, 1843, 1185, 10406, 10862, 40599, 10386, 12812, 10848, 12824, 12801, 12795, 7970, 8284, 1598, 1589, 1186, 7986, 8436, 1751, 1288, 1188, 1388, 9959, 1287, 8416, 7947, 1612, 1573, 1408.

PARK FIELD, MILLINGTON, TENN.

(10 JN-4 Canadian's.)

Numbered as follows: 39973, 39963, 39264, 39972, 39964, 39258, 39971, 39967, 39970, 39230.

(270 OX-5 motors.)

Numbered as follows: Sal. No. 2, 1736, 1403, 1241, 1741, 1471, 1263, 1746, 1473, 1278, 1748, 1478, 1312, 2417-M, 1490, 1315, 2806-M, 8439, 7936, 10699, 8459, 7939, 10737, 8508, 7943, 10760, 8546, 7955, 10775, 8560, 7948, 10786, 8576, 7953, 10791, 8582, 7964, 10807, 1318, 2830-M, 1544, 1321, 2922-M, 1550, 1358, 3093-M, 1552, 1366, 3111-M, 1569, 1398, 3155-M, 1734, 1401, 7934, 9110, 8138, 10916, 9229, 8158, 11167, 9376, 8195, 11412, 9626, 8218, 11492, 10073, 8236, 11563, 10092, 8274, 12726, 10183, 8326, 12837, 1402, W. D. 584, 1738, 1404, 1262, 1744, 1473, 1277, 1747, 1477, 1281, 2319-M, 1479, 1313, 2799-M, 1541, 7935, 10698, 8449, 7937, 10728, 8485, 7942, 10750, 8526, 7944, 10774, 8549, 7946, 10784, 8572, 7949, 10788, 8581, 7954, 10806, 8585, 7979, 1543, 1320, 2851-M, 1544, 1357, 2949-M, 1551, 1365, 3099-M, 1558, 1395, 3154-M, 1562, 1400, 3217-M, 1735, 1115, 10915, 9139, 8146, 10917, 9256, 8161, 11209, 9467, 8207, 11420, 10067, 8221, 11532, 10089, 8273, 11582, 10145, 8320, 12832, 10217, 8327, 8586, 7985, 10843, 8600, 8032, 10876, 8402, 8071, 10892, 8615, 8092, 10895, 8862, 8103, 10899, 8976, 8117, 10909, 11464, 11258, 11554, 11483, 11339, 11566, 11498, 11347, 10763, 10571, 10864, 10809, 10325, 8330, 12839, 10444, 8362, 12843, 10600, 8377, 12846, 10639, 8395, 45117, 10647, 8405, 45385, 10680, 8414, 45414, 11514, 11410, 11580, 11533, 11447, 11599, 11545, 11462, 10821, 10660, 10414, 10854, 10815, 8598, 7999, 10863, 8601, 8054, 10886, 8613, 8080, 10893, 8702, 8093, 10894, 8895, 8112, 10903, 9011, 8404, 11547, 11468, 11323, 11564, 11497, 11342, 11571, 10898, 10857, 10802, 10589, 12838, 10372, 8340, 12842, 10473, 8370, 12844, 10617, 8387, 45406, 10644, 8397, 45179, 10662, 8403, 45390, 10696, 11358, 11578, 11529, 11416, 11594, 11454, 11457, 11600, 10640, 10878, 10834, 10758.

BOLLING FIELD, ANACOSTIA, D. C.

(18 JN-4 D aeroplanes.)

Numbered as follows: 5338, 5345, 5342, 5339, 5231, 5340, 5334, 5343, 5337, 5344, 5226, 5200, 5199, 5197, 5335, 5202, 5229, 5341.

(31 OX-5 engines.)

Numbered as follows: 10836, 10650, 11614, 10930, 10849, 12182, 45079, 10910, 10066, 12115, 10833, 10053, 10967, 10934, 10526, 45095, 12044, 10941, 10986, 10913, 11612, 11179, 10552, 10405.

DOOR FIELD, ARCADIA, FLA.

(76 OX-5, engines.)

Numbered as follows: 7267, 8186, 8568, 8760, 8766, 10264, 11216, 11235, 11249, 11260, 11265, 11276, 11284, 11297, 11315, 11336, 11408, 11491, 46287, 8116, 8259, 8704, 8762, 8814, 10956, 11225, 11236, 11251, 11261, 11267, 11277, 11289, 11305, 11317, 11344, 11422, 11548, 46301, 8120, 8368, 8750, 8764, 10218, 11162, 11228, 11240, 11252, 11263, 11269, 11278, 11295, 11307, 11319, 11348, 11450, 11574, 46305, 8164, 8379, 8758, 8785, 10245, 11176, 11234, 11247, 11259, 11264, 11274, 11280, 11296, 11311, 11320, 11404, 11479, 46252, 46329.

EBERTS FIELD, LONOKE, ARK.

(184 OX-5 motors.)

Numbered as follows: 9716, 1570, 1680, 1709, 9775, 1514, 9840, 9910, 1201, 9767, 9684, 11656, 10643, 11679, 10289, 10421, 11777, 10137, 10785, 11429, 10306, 10782, 10605, 10442, 10820, 11093, 10787, 10828, 11833, 11781, 11841, 11314, 11190, 11766, 11774, 11780, 10286, 11804, 10637, 45030, 11798, 11747, 10223, 11826, 10847, 10839, 8680, 9276, 1097, 9971, 9403, 9895, 8568, 9918, 1631, 9916, 9891, 11795, 45024, 10655, 10521, c-569, 11820, 10086, 10783, 10867, 11686, 11724, 10090, 10480, 10620, 11001, 10604, 11127, 11610, 11222, 11834, 11750, 11157, 11720, 11746, 11736, 45021, 11778, 10282, 45025, 10288, 10394, 10794, 10674, 11799, 11768, 1679, 9970, 9709, 1638, 9913, 9896, 9929, 8769, 9642, 1419, 9931, 10304, 11716, 11816, 10285, 10271, 10320, 10322, 45023, 45028, 10260, 10437, 10739, 10793, 10852, 11151, 10221, 11054, 10550, 11325, 11718, 11709, 11675, 11995, 11740, 10496, 10250, 11729, 11772, 10927, 10342, 10860, 10603, 457 W. D., 10597, 9231, 9934, 9948, 1359, 9789, 9900, 9936, 9667, 9955, 9932, 9662, 10189, 45021, 11793, 10874, 10328, 45027, 10596, 11734, 10618, 10311, 10395, 10173, 10263, 10856, 11039, 10911, 10902, 10877, 11356, 11742, 11396, 11765, 11701, 11165, 11761, 11852, 11680, 10853, 10314, 10701, 10776, 10434, 655, 11852, 10498, 11779.

(102 JN-4 D, Curtiss type aeroplane, without motors.)

Numbered as follows: 33814, 39912, 33807, 33831, 33830, 39916, 33811, 33999, 34211, 34003, 33832, 5120, 5115, 5104, 5067, 5080, 3210, 2784, 4039, 5115, 3902, 3904, 5050, 5063, 5107, 3896, 39917, 33806, 33809, 33800, 33803, 33804, 33996, 34208, 34000, 34212, 33805, 2550, 1114, 5051, 5112, 5355, 5108, 3554, 5060, 1075, 3892, 3897, 3895, 3890, 3152, 1160, 33822, 33824, 33823, 33799, 33828, 33810, 33997, 34209, 34001, 34213, 33815, 5021, 3523, 5081, 5118, 3894, 5043, 5078, 5032, 5070, 5066, 5113, 5069, 3460, 2758, 33801, 33819, 33826, 33820, 33816, 33813, 33998, 34210, 34002, 34214, 33825, 1122, 5079, 3503, 3905, 3149, 5114, 5077, 5117, 5035, 2610, 5111, 5065, 5085, 5047.

(Aberdeen Proving Grounds, 2 OX-5 motors.)

Numbered as follows: 9492, 8754.

(JN-4 Curtiss aeroplanes type D, without motors, 2.)

Numbered as follows: 3466, 3492.

ROCKWELL FIELD.

(58 OX-5 motors.)

Numbered as follows: 9476, 8304, 8577, 1653, 3259, 1150, 9164, 1444, 8535, 8539, 8559, 1826, 1657, 453, 451, 1831, 9443, 1149, 1649, 1376, 7976, 1311, 1644, 1437, 8243, 8093, 1379, 1658, 568, 469, 8504, 8815, 1661, 1666, 1372, 9325, 1566, 3245, 8544, 8193, 1173, 9405, 999, 560, 8268, 1662, 1446, 1538, 9089, 9132, 8424, 1368, 1307, 8388, 8124, 1369, 887, 471.

(JN-4 aeroplanes type D (Curtiss), without motors, 2.)

Numbered as follows: 3093, 3979.

AVIATION GENERAL SUPPLY DEPOT, SAN ANTONIO, TEX.

(9 OX-5 motors.)

Numbered as follows: 3312, 3981, 5463, 2903, 2383, 3637, 3604, 3461, 3842.

AVIATION GENERAL SUPPLY DEPOT, LOS ANGELES, CALIF.

(153 OX-5 motors.)

Numbered as follows: 6064, 6135, 6129, 5912, 5932, 6089, 6037, 6057, 6034, 6032, 6053, 6028, 5988, 6017, 6159, 5982, 5925, 5963, 5939, 3181, M-82, 3050, 1972, 3095, 4235, 6107, 6079, 6056, 6093, 5986, 6040, 6105, 6138, 3061, M-58, 4244, M-539, M-477, 6100, 5991, 6133, 6073, 6109, 6067, 6010, 6055, 6105, 6039, 6025, 5952, 5870, 6051, 5960, 5933, 5964, 2540, 2300, 3030, 2999, 3020, 6086, 6050, 6121, 6111, 6070, 6048, 6097, 6127, 6134, 3210, 3167, M-519, M-543, 6110, 6020, 6021, 6046, 6077, 6149, 6082, 6062, 5948, 6013, 6014, 5962, 6063, 6054, 5929, 5969, 5934, 6256, 2431, 4243, 3059, 2711, 6075, 6140, 6117, 6116, 6080, 6096, 6071, 3173, 6141, 6132, 2958, 2765, M-4, M-534, 6108, 6035, 5974, 6068, 6053, 6087, 6023, 5967, 6094, 6009, 5987, 5943, 6031, 5937, 5923, 5714, 5947, 6226, M-64, M-57, 2416, 2792, 3150, 6103, 6069, 6043, 6155, 5981, 6113, 6090, 6024, 6368, 3187, 3086, M-545, M-533.

(Aviation general supply depot, Houston, Tex., 20 JN-4 Curtiss Canadian, 15 JN-4 Curtiss D, 1,100 J-1 standard aeroplanes.)

The JN-4 Canadian's being numbered as follows: 31964, 38577, 38167, 38565, 38573, 38551, 39172, 38579, 39166, 39161, 38537, 38558, 38547, 39170, 38583, 38568, 38555, 38586.

The JN-4 D's are numbered as follows: 2565, 2703, 2708, 2568, 2931, 2919, 3294, 2948, 2699, 2947, 1210, 2938, 2710, 2946.

The J-1 standard aeroplanes are numbered as follows: 22523, 41250, 41299, 41271, 41310, 41233, 41290, 41302, 41336, 41263, 41288, 41265, 41309, 41277, 41257, 41355, 41311, 41258, 41208, 22739, 22671, 22720, 22759, 22780, 22668, 22783, 22762, 22638, 22792, 22713, 22744, 22801, 22742, 22627, 22775, 22766, 22753, 41334, 41216, 41219, 41291, 41211, 41279, 41343, 41312, 41347, 41245, 41262, 41280, 41222, 41296, 41348, 41234, 41314, 41264, 22717, 22763, 22650, 22755, 22800, 22695, 22681, 22727, 22803, 22732, 22624, 22645, 22703, 22788, 22679, 22754, 22791, 22722, 22740, 41210, 41328, 41276, 41272, 41301, 41251, 41282, 41231, 41341, 41304, 41239, 41241, 41319, 41303, 41342, 41318, 41297, 41246, 22781, 22634, 22737, 22665, 22778, 22747, 22794, 22736, 22649, 22698, 22673, 22756, 22641, 22784, 22721, 22642, 22632, 22723, 22708, 22646, 41298, 41255, 41244, 41274, 41333, 41330, 41322, 41306, 22797, 41315, 41296, 41242, 41260, 41287, 41305, 41278, 41313, 41261, 22771, 22663, 22767, 22774, 22746, 22705, 22726, 22686, 22644, 22773, 22798, 22637, 22640, 22646, 22631, 22769, 22790, 22647, 22657, 22709, 22643, 22741, 22748, 22733, 22697, 41275, 22728, 22684, 41331, 41248, 41269, 41294, 41339, 41289, 41338, 41325, 41218, 41308, 41209, 41249, 41293, 41292, 41238, 22495, 22599, 22406, 22574, 22500, 22591, 22534, 22510, 22499, 22500, 22426, 22525, 22581, 22594, 22583, 22556, 22519, 22614, 22518, 22527, 22542, 22491, 22580, 22561, 22482, 22405, 22405, 22599, 22446, 22415, 22490, 22420, 22718, 22730, 22710, 22745, 22725, 41341, 41354, 22711, 41236, 41329, 41353, 41215, 41281, 41335, 41225, 41223, 41239, 41262, 41357, 41230, 41352, 41266, 41356, 41256, 22576, 22579, 22616, 22617, 22545, 22592, 22539, 22403, 22545, 22425, 22578, 22535, 22575, 22593, 22607, 22454, 22557, 22623, 22495, 22478, 22477, 22445, 22568, 22476, 22547, 22503, 22521.

22427, 22430, 22540, 22471, 22404, 22719, 22716, 22760, 22734, 22735, 41283, 41286,
 22752, 22750, 41295, 41350, 41240, 41343, 41344, 41323, 41221, 41317, 41224, 41214,
 41307, 41228, 41268, 41284, 41321, 41345, 22522, 22621, 22609, 22551, 22610, 22597,
 22608, 22604, 22514, 22524, 22573, 22549, 22533, 22586, 22517, 22578, 22596, 22564,
 22562, 22589, 22604, 22531, 22543, 22488, 22559, 22416, 22482, 22480, 22606, 22496,
 22419, 22555, 22475, 22414, 22587, 22410, 22743, 22731, 22789, 22667, 22704, 41273,
 22779, 22764, 22758, 41332, 41267, 41340, 41349, 41346, 41327, 41217, 41220, 41235,
 41213, 41252, 41278, 41247, 41253, 41337, 41254, 22505, 22625, 22600, 22611, 22603,
 22588, 22601, 22572, 22487, 22502, 22515, 22590, 22526, 22582, 22618, 22612, 22409,
 22565, 22553, 22536, 22481, 22473, 22464, 22506, 22546, 22434, 22626, 22512, 22413,
 22479, 22412, 22437, 22436, 22417, 22567, 22441, 22460, 22559, 22421, 22504, 22403,
 22450, 22676, 22675, 22761, 22633, 22796, 22694, 22695, 22782, 22658, 22715, 22651,
 4622, 4886, 1835, 1843, 1975, 2012, 1914, 1877, 1952, 2036, 1940, 2008, 1896, 1947, 1970,
 1954, 1873, 1937, 1920, 1904, 1887, 1977, 2010, 1249, 1891, 1881, 1966, 2002, 1842, 1919,
 1936, 4858, 4859, 4937, 4887, 4857, 4686, 4880, 4970, 4969, 4760, 4819, 4879, 4729, 4861,
 22504, 22439, 22435, 22474, 22408, 22429, 22635, 22670, 22749, 22738, 22768, 22724,
 22707, 22636, 22648, 22770, 22751, 1032, 4872, 1862, 1875, 1893, 1953, 2022, 1921, 1931,
 1950, 1971, 1958, 1892, 2024, 1879, 1907, 1963, 1994, 1903, 1956, 1883, 2054, 1909, 1948,
 1999, 1935, 1984, 1982, 1998, 2043, 4855, 4883, 4856, 4788, 4621, 4964, 4837, 4873, 4853,
 4804, 4865, 4885, 4869, 4843, 1709, 22520, 22500, 22405, 22537, 22424, 22552, 22680,
 22699, 22706, 22682, 22787, 22653, 22639, 22652, 22776, 22705, 22773, 1796, 4881, 1864,
 2042, 1913, 1993, 2029, 1910, 1941, 1912, 2055, 1927, 2032, 1915, 1908, 1939, 1928, 2004,
 2053, 1893, 1084, 1888, 1276, 1996, 1938, 1906, 2050, 1955, 1986, 2027, 4867, 4972, 4575,
 4934, 4940, 4678, 4936, 4876, 4864, 4909, 4884, 4812, 4882, 4832, 2359, 22472, 22442,
 22438, 22406, 22444, 22705, 22629, 22700, 22655, 22674, 22654, 22620, 22714, 22669,
 22630, 22712, 1872, 1849, 4675, 1732, 2039, 1929, 1917, 2151, 1968, 1943, 1922, 1959,
 1899, 2040, 1897, 1886, 2047, 1760, 1965, 2006, 1894, 2016, 1951, 1889, 1934, 1886, 1268,
 2033, 1916, 1957, 1975, 4903, 4854, 4787, 4730, 4938, 4843, 4709, 4748, 4800, 4874, 4871,
 4923, 4656, 4065, 4685, 4833, 4866, 1840, 4613, 1831, 1799, 1857, 4821, 1858, 4717, 1833,
 1880, 1850, 1815, 1822, 4638, 1900, 2003, 2056, 2034, 1694, 4525, 4683, 4501, 4342, 4700,
 4538, 4898, 4807, 4690, 4900, 1868, 4766, 1687, 2049, 1852, 4771, 1040, 4743, 1710, 4740,
 4776, 4715, 4917, 1740, 1688, 1026, 2387, 4783, 4632, 1830, 4486, 1713, 4655, 4959, 1810,
 1050, 4485, 1005, 4848, 4840, 1692, 4624, 4762, 4774, 1794, 1821, 1855, 1803, 1785, 1775,
 1827, 1882, 1778, 1798, 1980, 2026, 1905, 1933, 1938, 4736, 4694, 4947, 4960, 4915, 1819,
 1826, 4849, 4707, 4498, 4643, 4831, 1745, 1861, 4906, 4619, 4674, 4801, 4552, 1045, 4608,
 1669, 1016, 1985, 4711, 4641, 1027, 4863, 4644, 4568, 4574, 1683, 1885, 1051, 1665, 4636,
 4594, 4495, 4635, 4782, 4745, 1845, 4616, 4928, 1793, 1823, 4633, 1816, 1787, 1795, 1728,
 1730, 1811, 1791, 1945, 1942, 1926, 1911, 1987, 2031, 4533, 4925, 4814, 1670, 4930, 4956,
 4888, 2274, 1735, 4941, 1704, 4830, 4926, 1680, 1678, 4723, 1047, 4795, 4673, 4739, 4831,
 4925, 1661, 4687, 4517, 4534, 4962, 4910, 4791, 4731, 2401, 4769, 1878, 5689, 1747, 4893,
 4902, 2309, 4945, 1006, 4860, 1801, 1672, 1045, 1808, 1773, 1867, 4765, 1818, 1813,
 1812, 1854, 1828, 4781, 1992, 1968, 1935, 1990, 2057, 4733, 2570, 4939, 4958, 4571, 4625,
 1023, 4806, 4796, 1044, 4808, 1708, 4565, 1972, 1021, 4929, 4684, 1714, 1034, 4727, 4491,
 4921, 1749, 1869, 1016, 4573, 4967, 4907, 4896, 4584, 2271, 1851, 4703, 1748, 4931, 4510,
 4665, 4654, 1729, 4838, 4790, 4953, 1036, 1797, 4815, 4770, 4750, 4602, 4675, 1731, 4719,
 1901, 2501, 1807, 4680, 1778, 4963, 4591, 4757, 4540, 1724, 4752, 4974, 4581, 4797, 4847,
 1876, 4593, 4806, 1695, 2362, 4841, 1839, 4818, 1776, 1763, 1898, 2052, 2038, 1871, 2030,
 1850, 1930, 1973, 1979, 1962, 973, 970, 985, 980, 978, 4839, 4537, 1824, 4735, 1806, 1847,
 1024, 4558, 4834, 4572, 4709, 2372, 4913, 1739, 4829, 4904, 4702, 4746, 1700, 1719, 4966,
 2390, 4908, 4679, 4758, 4560, 4952, 4914, 1723, 4905, 1726, 4741, 2378, 4772, 1725, 4551,
 1902, 1961, 2021, 2023, 1944, 2007, 2046, 1983, 2015, 1719, 206, 967, 964, 984, 2726, 3724,
 4671, 2397, 1014, 1008, 2385, 4562, 4588, 4587, 4933, 4563, 4712, 4531, 2386, 1721, 4862,
 4973, 4701, 4798, 4511, 1681, 4912, 4170, 1699, 4693, 4922, 4755, 2376, 4646, 4737, 1701,
 4696, 4710, 1757, 1925, 2048, 2019, 1978, 2041, 2013, 2045, 1890, 2025, 1918, 2017, 2008,
 988, 966, 992, 4659, 4716, 1991, 1056, 4520, 4507, 4578, 4639, 1707, 4623, 4672, 1838,
 4994, 4775, 1689, 4792, 2388, 2377, 4911, 1720, 4851, 4799, 4786, 4744, 2255, 4809, 4606,
 4651, 4965, 4901, 1737, 4777, 4311, 1770, 4657, 2011, 1946, 2028, 2002, 2044, 2025, 2000,
 1989, 2037, 1924, 196, 993, 986, 971, 997.

SOUTHER FIELD, AMERICUS, GA.

(180 OX-5 motors.)

Numbered as follows: 1196, 1737, 3269, 5239, 8066, 8097, 8171, 8202, 8260, 8481, 8746,
 9104, 9237, 9302, 9332, 9349, 9385, 9429, 9483, 9501, 9517, 9524, 9538, 9575, 9630, 9688,
 9700, 9759, 9935, 10042, 10055, 10069, 10109, 10338, 10432, 10742, 11076, 11174, 11373,
 11485, 12813, 45061, 45426, 46478, 46565, 1428, 2352, 5189, 7941, 8075, 8099, 8184,

8212, 8293, 8603, 8914, 9045, 9260, 9309, 9334, 9375, 9420, 9452, 9484, 9502, 9518, 9528, 9553, 9579, 9640, 9693, 9728, 9771, 9957, 10046, 10057, 10071, 10117, 10403, 10451, 10751, 11096, 11202, 11394, 11818, 12831, 45400, 46300, 46521, 46625, 1484, 3194, 5209, 8038, 8086, 8104, 8194, 8224, 8366, 8630, 8978, 9149, 9271, 9315, 9342, 9378, 9421, 9480, 9485, 9503, 9520, 9531, 9554, 9604, 9665, 9696, 9739, 9774, 9972, 10049, 10060, 10103, 10154, 10412, 10462, 11042, 11140, 11223, 11442, 11902, 12882, 45420, 46333, 46526, 46630, 1619, 3210, 5229, 8059, 8088, 8134, 8196, 8255, 8427, 8713, 9000, 9236, 9280, 9331, 9347, 9379, 9428, 9481, 9496, 9514, 9523, 9537, 9564, 9622, 9672, 9698, 9743, 9794, 10034, 10050, 10063, 10104, 10188, 10415, 10721, 11072, 11171, 11279, 11470, 11922, 44761, 45423, 46462, 46533, 572.

(JN-4 Canadian Curtiss type aeroplanes without motors, 26.)

Numbered as follows: 39127, 39208, 39212, 39216, 39221, 39350, 951, 39136, 39209, 39213, 39217, 39222, 39357, 966, 39142, 39210, 39214, 39218, 39223, 943, 39205, 39211, 39215, 39220, 39225, 944.

TAYLOR FIELD, MONTGOMERY, ALA.

(JN-4 Curtiss type aeroplanes without motors: 7 JN-4 A's, 2 JN-4 Canadians, 104 JN-4 D's.)

The JN-4 A's are numbered as follows: 1156, 1525, 1356, 1578, 1396, 2747, 1503.

The JN-4 Canadians are numbered as follows: 39328, 39228.

The JN-4 D's are numbered as follows: 1000, 2433, 2442, 2563, 2840, 3113, 3763, 3768, 3782, 3786, 3796, 3816, 3825, 2916, 3924, 5029, 5056, 5068, 3910, 33797, 34099, 34103, 34107, 34271, 44380, 44384, 1387, 2435, 2443, 2803, 2910, 3456, 3764, 3776, 3783, 3788, 3804, 3822, 3827, 3917, 4997, 5052, 5059, 5071, 33777, 33798, 34100, 34104, 34108, 44375, 44381, 44385, 2430, 3438, 2446, 2815, 2954, 3567, 3766, 3778, 3784, 3789, 3805, 3823, 3909, 3919, 5014, 5054, 5061, 5073, 33794, 33833, 34101, 34105, 34109, 44378, 44382, 44386, 2431, 2440, 2447, 2835, 3052, 3761, 3767, 3781, 3785, 3791, 3814, 3824, 3912, 3922, 5025, 5055, 5164, 5074, 33796, 34098, 34102, 34106, 44270, 44379, 44383, 45288.

(170 OX-5 motors.)

Numbered as follows: 1383, 1616, 2813, 8190, 8345, 8772, 9120, 9240, 9434, 9557, 9721, 9786, 9855, 9890, 9941, 10068, 10148, 10211, 10272, 10329, 10349, 10383, 10638, 10803, 11071, 11132, 11316, 11502, 11735, 11782, 11821, 11828, 11838, 11845, 11850, 11855, 11877, 11921, 45062, 45126, 46321, 46355, 36539, 1387, 2248, 7968, 8302, 8448, 8790, 9174, 9327, 9466, 9603, 9744, 9795, 9875, 9893, 9944, 10084, 10150, 10215, 10296, 10331, 10350, 10391, 10669, 10939, 11082, 11136, 11366, 11671, 11737, 11796, 11823, 11830, 11839, 11846, 11851, 11858, 11889, 11930, 45063, 45598, 46326, 46356, 46633, 1389, 2274, 8151, 8310, 8450, 8802, 9211, 9400, 9486, 9645, 9754, 9818, 9878, 9899, 9988, 10114, 10161, 10228, 10310, 10339, 10355, 10609, 10673, 11060, 11106, 11145, 11438, 11704, 11733, 11812, 11824, 11832, 11842, 11847, 11853, 11867, 11895, 11966, 45064, 46148, 46342, 46365, 1574, 2593, 8160, 8343, 8604, 8857, 9226, 9407, 9550, 9682, 9765, 9825, 9883, 9919, 10003, 10115, 10186, 10258, 10327, 10343, 10357, 10616, 10734, 11064, 11108, 11299, 11493, 11730, 11773, 11817, 11827, 11837, 11843, 11848, 11854, 11869, 11990, 40589, 45068, 46295, 46343, 46380, 45147, 45165, 69813, 69949, 45149, 45173, 69828, 69952, 45140, 45394, 69835, 69956, 45159, 69769, 69929.

(JN-4 Curtiss type aeroplanes without motors being: 12 JN-4 A's; 21 JN-4 Canadian's; 82 JN-4 D's.)

The JN-4 A's are numbered as follows: 1213, 1274, 1496, 1224, 1276, 1507, 1250, 1292, 1510, 1257, 1482, 1535.

The JN-4 Canadian's are numbered as follows: 39227, 39240, 39247, 39251, 39257, 39267, 39222, 39241, 39248, 39252, 39263, 39233, 39243, 39249, 39253, 39264, 39239, 39245, 39250, 39255, 39265.

The JN-4 D's are numbered as follows: 1208, 2742, 3034, 3087, 3243, 3509, 3525, 3538, 3543, 3551, 3792, 3819, 33838, 33849, 33855, 33862, 33866, 33874, 33879, 44316, 44320, 2551, 2975, 3036, 3096, 3245, 3512, 3527, 3539, 3547, 3552, 3797, 3145, 33841, 33850, 33856, 33863, 33868, 33875, 33880, 44317, 44321, 2679, 3028, 3042, 3147, 3410, 3514, 3531, 3540, 3548, 3553, 3799, 33834, 33846, 33852, 33858, 33864, 33871, 33876, 33992, 44318, 2739, 3030, 3059, 3177, 3506, 3515, 3534, 3541, 3549, 3760, 3815, 33837, 33847, 33853, 33859, 33865, 33873, 33878, 44315, 44319.

PAYNE FIELD, WEST POINT, MISS.

(243 OX-5 motors.)

Numbered as follows: 1213, 1717, 3109, 8102, 8159, 8275, 8457, 8623, 8683, 8761, 9206, 9300, 9340, 9373, 9435, 9474, 9540, 9574, 9602, 9638, 9740, 9909, 10038, 10083, 10099, 10118, 10139, 10257, 10371, 10426, 10455, 10495, 10518, 10577, 10623, 10648, 10664, 10694, 10772, 10888, 11083, 11128, 11144, 11173, 11186, 11226, 11244, 11406, 11558, 11866, 12761, 45071, 45077, 45092, 45099, 45110, 45131, 1298, 1785, 8000, 8114, 8181, 7306, 8552, 8656, 8719, 8808, 9245, 9316, 9353, 9379, 9439, 9487, 9551, 9576, 9614, 9644, 9770, 9925, 10048, 10085, 10102, 10119, 10176, 10262, 10395, 10436, 10470, 10497, 10523, 10582, 10624, 10652, 10670, 10729, 10777, 10901, 11109, 11130, 11156, 11181, 11195, 11229, 11272, 11413, 11767, 11875, 12773, 45072, 45080, 45093, 45104, 45113, 45134, 1399, 2305, 8033, 8136, 8245, 8307, 8565, 8660, 8722, 9063, 9259, 9318, 9363, 9406, 9468, 9506, 9559, 9587, 1618, 9656, 9829, 9963, 10051, 10087, 10106, 10123, 10209, 10353, 10419, 10439, 10489, 10503, 10554, 10588, 10625, 10653, 10682, 10735, 10789, 10964, 11114, 11133, 11166, 11182, 11218, 11231, 11275, 11520, 11787, 11929, 12840, 45074, 45082, 45096, 45106, 45114, 45142, 1622, 2658, 8044, 8155, 8263, 8311, 8612, 8669, 8739, 9156, 9279, 9333, 9366, 9412, 9470, 9534, 9565, 9594, 9619, 9666, 9861, 10026, 10065, 10091, 10108, 10136, 10216, 10365, 10423, 10445, 10494, 10514, 10569, 10621, 10635, 10656, 10692, 10741, 10880, 10994, 11118, 11139, 11168, 11184, 11221, 11239, 11333, 11515, 11809, 11943, 41575, 45076, 45085, 45097, 45107, 45118, 45144.

SCOTT FIELD, BELLEVILLE, ILL.

(177 OX-5 motors.)

Numbered as follows: 1296, 8009, 8240, 8456, 8578, 8595, 8622, 8639, 8670, 8712, 8741, 8807, 8828, 8839, 8891, 8923, 8956, 8999, 9031, 9127, 9224, 9456, 9491, 9522, 9546, 9561, 9593, 9608, 9747, 10334, 10388, 10405, 10950, 10987, 11069, 11100, 11197, 11370, 11601, 11836, 11916, 11986, 12072, 12390, 12861, 1301, 8145, 8336, 8479, 8590, 8616, 8624, 8644, 8672, 8723, 8742, 8819, 8834, 8858, 8893, 8925, 8965, 9014, 9040, 9192, 9244, 9462, 9504, 9530, 9555, 9567, 9595, 9609, 10134, 10363, 10397, 10667, 10975, 11035, 11075, 11102, 11241, 11436, 11619, 11849, 11941, 11991, 12329, 12393, 1418, 8200, 8337, 8514, 8591, 8620, 8625, 8645, 8688, 8729, 8765, 8822, 8835, 8860, 8908, 8928, 8985, 9017, 9080, 9198, 9257, 9471, 9513, 9533, 9556, 9582, 9600, 9617, 10226, 10379, 10401, 10684, 10977, 11062, 11080, 11103, 11281, 11503, 11764, 11897, 11982, 12005, 12341, 12767, 1492, 8215, 8352, 8529, 8593, 8621, 8633, 8646, 8697, 8732, 8773, 8823, 8836, 8876, 8920, 8946, 8993, 9021, 9116, 9201, 9394, 9472, 9519, 9536, 9558, 9591, 9601, 9629, 10256, 10385, 10402, 10928, 10978, 11063, 11086, 11147, 11301, 11585, 11785, 11911, 11983, 12062, 12355, 12774.

(1 JN-4 Canadian Curtiss type aeroplane without motor.)

Numbered: 991.

MATHER FIELD, SACRAMENTO, CALIF.

(197 OX-5 motors, 113 JN-4 D's.)

The OX-5 motors are numbered as follows: 44836, 11993, 44848, 11572, 44857, 12625, 44824, 12687, 44860, 11266, 11134, 11050, 10849, 11352, 11887, 12506, 12617, 44822, 44833, 44845, 44850, 44855, 44867, 8531, 8282, 9689, 9977, 9655, 1838, 9129, 9463, 9613, 9660, 8911-A, 9611, 9562, 9867, 8272, 9646, 8458, 9783, 9292, 9273, 9756, 9797, 9834, 9884, 9940, 9973, 9979, 12668, 44868, 11158, 12533, 12296, 12599, 11282, 11294, 11912, 12530, 10724, 10730, 44832, 11363, 11963, 12543, 12363, 44828, 44839, 44846, 44851, 44856, 44869, 8916, 9996, 8463-A, 8801, 8551, 8011, 9414, 9549, 9620, 9675, 9679, 9804, 8875, 9408, 9288, 9926, 9731, 8562, 3148, 1341, 9757, 9805, 9844, 9914, 9953, 1655, 12027, 11512, 11525, 12596, 44863, 11051, 12665, 11474, 11045, 11052, 11068, 11025, 10006, 11732, 11981, 12585, 12670, 44829, 44840, 44847, 44853, 44858, 9897, 8924-A, 9764, 9772, 9726, 1536, 8649, 9390, 9581, 9625, 9704, 9427, 9586, 9917, 9819, 9030, 8538-A, 9942, 8631, 3177, 8292, 9768, 9812, 9862, 9922, 9956, 9088, 12626, 44830-X, 11193, 12629, 11033, 44844, 11861, 12150, 44843, 44861, 10230, 44825, 10014, 11758, 12011, 12607, 44821, 44837, 44841, 44849, 44854, 44865, 9950, 8995, 907, 9117, 9760, 1171, 8966, 9419, 9607, 9637, 9707, 9720, 9796, 9694, 8233, 9859, 1147, 9803, 9708, 520, 9723, 9779, 9824, 9880, 9927, 9965, 1194.

(113 JN-4 D's.)

The JN-4 D's are numbered as follows: 1100, 1230, 2406, 2414, 2421, 3610, 3615, 3619, 3625, 3630, 3635, 3640, 3644, 3650, 3656, 3664, 3669, 3677, 3683, 3993, 4000, 1174, 2541, 34029, 34038, 47418, 47430, 47448, 39871, 1101, 1446, 2407, 2415, 2422, 3612, 3616, 3621, 3626, 3631, 3636, 3641, 3645, 3651, 3657, 3665, 3670, 3680, 3694, 3994, 1166, 1229, 3220, 34032, 34039, 48419, 47432, 47450, 1104, 1459, 2409, 2416, 3416, 3613, 3617, 3622, 3628, 3633, 3637, 3642, 3646, 3653, 3662, 3666, 3674, 3681, 3991, 3996, 1168, 1232, 34026, 34033, 34040, 47420, 47436, 39870, 1165, 2405, 2413, 2418, 3608, 3614, 3618, 3624, 3629, 3634, 3639, 3643, 3647, 3654, 3663, 3668, 3676, 3682, 3992, 3998, 1172, 1440, 34027, 34034, 47417, 47424, 47437, 39193.

CHANUTE FIELD, RANTOUL, ILL.

(223 OX-5 Curtiss motors.)

Numbered as follows: 10056, 10237, 10333, 10389, 10411, 10452, 10471, 10487, 10587, 10749, 10951, 11329, 11353, 11371, 11386, 11428, 11458, 12769, 45412, 1207, 1279, 1394, 1617, 1675, 2938,¹ 8031, 8490, 8594, 8663, 8717, 8794, 8833, 8867, 8894, 8905, 8917, 8939, 8964, 8994, 9044, 9071, 9106, 9141, 9221, 9246, 9264, 9817, 9355, 9454, 9493, 9499, 9516, 9560, 9583, 9596, 9263, 10224, 10274, 10348, 10390, 10414, 10454, 10474, 10488, 10642, 10765, 11285, 11335, 11354, 11379, 11411, 11440, 11486, 12889, 45422, 1211, 1327, 1453, 1627, 1765, 3142,¹ 8347, 8517, 8635, 8679, 1720, 8796, 8850, 8870, 8897, 8907, 8921, 8948, 8970, 9016, 9045, 9076, 9113, 9190, 9222, 9257, 9266, 9321, 9431, 9459, 9494, 9507, 9535, 9563, 9589, 9597, 9706, 10229, 10292, 10373, 10392, 10420, 10460, 10482, 10498, 10654, 10840, 11290, 11338, 11360, 11384, 11423, 11446, 11526, 40608, 45432, 1264, 1353, 1486, 1629, 1825, 7916, 8253, 8575, 8647, 8691, 8776, 8797, 8856, 8872, 8899, 8909, 8927, 8949, 8975, 9025, 9052, 9094, 9126, 9209, 9223, 9261, 9269, 9335, 9440, 9478, 9495, 9508, 9539, 9566, 9590, 9598, 9870, 10231, 10330, 10380, 10407, 10444, 10461, 10483, 10509, 10714, 10931, 11327, 11341, 11367, 11385, 11426, 11454, 11546, 45395, 1202, 1268, 1364, 1497, 1637, 2423, 8005, 8312, 8583, 8653, 8714, 8784, 8832, 8859, 8875, 8904, 8910, 8938, 8950, 8976, 9026, 9053, 9096, 9137, 9210, 9239, 9262, 9308, 9341, 9453, 9489, 9497, 9512, 9548, 9578, 9592, 9605.

AVIATION GENERAL SUPPLY DEPOT, LITTLE ROCK, ARK.

(570 OX-5 motors.)

Numbered as follows: 70313, 70338, 70391, 70359, 70316, 70361, 70304, 71134, 70991, 71138, 71131, 70985, 71191, 70939, 40293, 70346, 70342, 70273, 70345, 70397, 71015, 71156, 71012, 70917, 71155, 71185, 71194, 71145, 71209, 71222, 71234, 71228, 71226, 71236, 71252, 71246, 70378, 70408, 70419, 70446, 70305, 71189, 71267, 71240, 71248, 71255, 71220, 71253, 71217, 70424, 70462, 70464, 70460, 70434, 70497, 70491, 70371, 70398, 70404, 70422, 70351, 70338, 70344, 71167, 71147, 71146, 71125, 71039, 71175, 71183, 71187, 70328, 70348, 70337, 70381, 70401, 70366, 71153, 71137, 70979, 71152, 71097, 71198, 71190, 71196, 71265, 71260, 71261, 71212, 71241, 71254, 71214, 71244, 70248, 70396, 70394, 70339, 71203, 71232, 71230, 71264, 71242, 71233, 71235, 71256, 71251, 70309, 70381, 70459, 70405, 70355, 70380, 70250, 70439, 70340, 70311, 70349, 70362, 70382, 70433, 71140, 70931, 70988, 71127, 71118, 71186, 71154, 70333, 70360, 70325, 70390, 70342, 70367, 70279, 71124, 71143, 71099, 71115, 71095, 71207, 71142, 71200, 71263, 71213, 71211, 71229, 71227, 71245, 71247, 70676, 70352, 70407, 70457, 70428, 71201, 71216, 71237, 71243, 71250, 71259, 71215, 71238, 71239, 70414, 70429, 70296, 70297, 70356, 70308, 70379, 70357, 70399, 70385, 70342, 70354, 70386, 70320, 71136, 71157, 71135, 71029, 71158, 70908, 71178, 70423, 70373, 70341, 70293, 70280, 70315, 71121, 70995, 70873, 71049, 71116, 70899, 71193, 71171, 71202, 71238, 71219, 71210, 71218, 71223, 71257, 71231, 70331, 70456, 70426, 70411, 70410, 71192, 71225, 71249, 70584, 71262, 71224, 71266, 71221, 70310, 70369, 70377, 70276, 70415, 70421, 70398, 70490, 70321, 70489, 70450, 70400, 70409, 70436, 70363, 70406, 70451, 70530, 70500, 70634, 70597, 70683, 70540, 70623, 70743, 70697, 70507, 70643, 70487, 70626, 70700, 70588, 70285, 70733, 70710, 70978, 70983, 70993, 70952, 70961, 70997, 71013, 70927, 71011, 71032, 70970, 71033, 71075, 70936, 70969, 70949, 70902, 70822, 70856, 70828, 70846, 70787, 70947, 70922, 70659, 70772, 70678, 70703, 70796, 70564, 70592, 70607, 70766, 70713, 70727, 70413, 70307, 70353, 70420, 70412, 70347, 70372, 70384, 70790, 70561, 70561, 70509, 70505, 70589, 70758, 70656, 70718, 70639, 70640, 70504, 70639, 70780, 70773, 70728, 70515, 70388, 70998, 70795, 71007, 70976, 70965, 70969, 71023, 70930, 71031, 71037, 71005, 71043, 71025, 70958, 70943, 70957, 70695, 70837, 70862, 70838, 70905, 70844, 70857, 70969, 70751, 70744, 70712, 70716, 70806, 70786, 70788, 70753.

¹ Factory number.

70789, 70748, 70857, 70358, 70336, 70448, 70402, 70324, 70295, 70375, 70416, 70473, 70544, 70605, 70541, 70573, 70725, 70666, 70580, 70723, 70614, 70670, 70613, 70537, 70754, 70677, 70689, 70731, 70963, 71010, 71030, 71009, 70824, 71002, 71014, 71028, 71036, 70941, 70933, 71007, 71035, 71052, 70971, 70946, 70726, 70807, 70847, 70681, 70840, 70878, 70977, 70901, 70922, 70736, 70691, 70730, 70566, 70675, 70793, 70636, 70735, 70809, 70814, 70901, 70403, 70496, 70417, 70436, 70365, 70392, 70393, 70660, 70493, 70302, 70538, 70451, 70542, 70517, 70714, 70747, 50556, 70466, 70449, 70432, 70633, 70737, 70764, 70583, 70720, 70973, 71020, 71000, 70982, 70920, 71006, 70960, 71047, 71021, 71019, 70999, 71026, 71016, 71004, 70992, 70942, 70826, 70821, 70851, 70801, 70841, 70883, 70823, 70916, 70926, 70717, 70732, 70661, 70646, 70791, 70699, 70761, 70755, 70711, 70774, 70916, 70922, 70903, 70445, 70622, 70628, 70664, 70601, 70741, 70745, 70686, 70598, 70777, 70944, 70990, 70951, 71108, 71078, 71006, 70906, 71083, 71100, 71034, 71096, 70925, 71144, 70959, 70934, 70657, 70483, 70682, 70677, 70709, 70575, 70719, 70752, 70674, 70845, 70968, 70742, 70948, 71123, 71060, 71064, 71124, 70924, 71041, 71103, 71130, 71063, 71092, 70929, 70470, 70690, 70523, 70734, 70705, 70687, 70610, 70771, 70781, 70729, 70808, 70919, 70775, 70914, 70996, 71066, 71056, 71111, 71060, 71087, 71070, 71122, 71113, 70779, 70685, 70632, 70692, 70658, 70474, 70650, 70645, 70782, 70760, 70557, 70850, 70966, 70812, 70750, 71076, 71038, 71112, 71107, 71051, 70935, 71133, 71109, 71094.

EXHIBIT No. 109, GEN. MENOHER.

MARCH 8, 1919.

From: The Director of Air Service.

To: The Director of Sales, Purchase, Storage and Traffic Division, General Staff.

Subject: Sale of aerial material.

1. It is recommended that the director of Air Service be directed under authority of the Secretary of War, pursuant to the provisions of an act of Congress approved July 9, 1918 (Public, No. 193, 65th Cong., p. 6), to sell to the Curtiss Aeroplane & Motor Corporation, the following property:

1. 4,608 Curtiss OX-5 motors.
2. 1,616 JN-4 Curtiss type aeroplanes, without motors.
3. 1,100 standard J-1 aeroplanes, without motors.

And it is further recommended that the attached draft of contract for the sale of the above property be approved, and that the director of Air Service be directed to execute and deliver same as contracting officer.

2. The expense to the United States of carrying out this contract will be comparatively small. The hangars set aside for the purpose of holding this property are not needed for other purposes, and can be guarded and cared for by Air Service personnel necessarily retained at these stations. A large number of the planes, complete, will be flown to the place of delivery to the purchaser. Such crating and boxing of other material for delivery, as may be necessary, can be done with material now at the fields. The cost of freight is the only item of consequence. The purchaser has the opportunity to elect to take property at its present location, instead of requiring it to be concentrated at the stations mentioned in the contract, and will, doubtless, avail himself of this opportunity as to some of the property. Shipments will be made to the nearest point of concentration. The 1,100 standard planes are now crated and in storage at Houston, Tex., where they are to be delivered to the purchaser; there will be no expense of delivery of same to the purchaser.

3. This property was purchased by the Government since April 6, 1917, for the purpose of training Air Service personnel.

4. The need for this material has ceased, and it is deemed expedient to sell the same before further deterioration.

5. A large part of this property is worthless to the Government, because some of it is worn out and some is out of date. Such of the above property as is in running condition and adaptable for use at the present time is surplus stock. The Air Service has ample planes and motors of these types, aside from the above, for its present and prospective needs.

6. The standard aeroplanes described above will have to be changed in design before they can be flown, and, consequently, all of that material is practically worthless to the Government, because the expense of changing the design would be almost as much as the value of the planes, and this type of plane is not a desirable training plane.

7. Effort has been made since November 11, 1918, to sell aerial material by advertising for bids. In response to these requests for bids, which were given wide publication, only a few offers were received for the best aeroplanes and motors, and these offers were at a comparatively low price.

8. Effort has been made to secure an offer for the sale of part of or all this material to the manufacturers of aeroplanes. All manufacturers of aeroplanes, including the

L. W. F. Engineering Co., have been solicited to make an offer to purchase this property. Some of them have declined entirely to make any offer whatsoever.

9. The Curtiss Aeroplane & Motor Corporation has offered to purchase the above-described material, and a contract for that purpose has been prepared, a copy of which is attached. The terms and conditions of this agreement have been agreed to by the purchaser. This is the best offer that the director of Air Service has been able to obtain for this property, and he has made diligent effort in this direction.

10. There is no general market for aeroplanes or aeroplane motors. This industry is in its infancy. Designs change rapidly, so that material that is of substantial value to-day may be of little value in the near future.

11. The operation of an aeroplane requires the constant attention of a skilled mechanic. No air routes have been thoroughly established in the United States. It is represented that those planes should not be sold to the general public for the reason that under present conditions it would too greatly endanger the lives of people and property.

12. Most of these planes will have to be overhauled before they can be flown. If they were sold to the general public, damage might result from their operation, due to defects now existing in this material, some of which are latent and some of which are patent, and it is probable that large claims covering such damage would be presented against the Government, and it is believed the War Department might be severely criticized for selling aeroplanes indiscriminately to the public.

13. It is, therefore, urged that the welfare of the public demands that these planes and motors be sold to a reliable manufacturer, who can overhaul them and sell them with his guaranty, to such purchasers as may properly operate them.

CHAS. T. MENOHER,
Major General, United States Army,
Director of Air Service.

MARCH 24, 1919

From: The Director of Air Service.

To: Mr. C. W. Hare, Assistant Director of Munitions, Munitions Building, Washington, D. C.

Subject: Sale of surplus aeroplanes and motors.

1. Pursuant to instructions contained in your letter of March 20, I hand you herewith "Complete statement of all steps which have been taken to dispose of aeroplanes indicating the results in each particular method and also outlining clearly your reasons for the final adoption of the method now under discussion; that is, the sale of this equipment to the Curtiss Co."

2. The first steps that were taken looking to the sale of obsolete aeroplane equipment were by the Salvage Branch, Supply Section, Division of Military Aeronautics, before I was detailed to duty as Director of Air Service. A complete report of the bids received for aerial material advertised for sale has been made to your board.

3. All of these bids were rejected by Maj. Gen. William L. Kently, Director of Military Aeronautics, for the reason, I understand, that after bids were invited he decided that it would be an unwise policy to sell obsolete planes (Standard) and condemned motors (Hall-Scott) to the public where it was not practicable to make complete overhaul, substitute OX-5 motors for Hall-Scotts, and give to the purchaser a guaranty equivalent to that which should go with a new plane and engine. Furthermore, there was no knowing into whose hands these semiobsolete planes and engines might fall, nor whether the purchasers know how to properly handle and fly them. Also, there was great probability of heavy suits for damages being brought against the War Department in case of crashes with ensuing injuries to pilot and passenger.

4. About this time (January 15 to February 15) numerous requests were coming into this office to purchase serviceable Curtiss planes for use during the coming summer, these requests coming mostly from ex-flying officers of the Air Service. Lieut. Eddie Stinson wished to buy 20 planes, Civilian Instructor Smith wished to buy 10. Lieut. Logg and associates wanted 5 or 10, etc. Many other inquiries are on file.

5. I directed that a study be made of the probable needs for Air Service training for the next two years, setting aside sufficient of our newest and best equipment for this work and adding 100 per cent as a margin of safety, all this based on the General Staff study of a future air force of 24,000 officers and men, and listing all the rest of our flying training equipment as obsolete, obsolescent, and surplus, and requesting authority from the Secretary of War to sell it to individual purchasers as they might apply from time to time.

6. On or about February 7 my executive officer, Col. Milton F. Davis, prepared a list, as outlined in preceding paragraph, and made an engagement to bring the same

to your office for the purpose of discussing the possible sale and methods of sale of the surplus planes and engines. He made an engagement by phone with Mr. Morse, met Mr. Morse for a few minutes, and was turned over to Col. Glover, with whom the question was discussed at length. Col. Glover directed Col. Davis to prepare a memorandum showing all of the surplus planes and motors in question, together with the prices at which the Director of Air Service thought these articles should be sold, bring it back to the Director of Sales, and he (Col. Glover) was of the opinion that the Director of Sales would give blanket authority to sell this material as requested by the Director of Air Service.

7. In order that aeroplane manufacturers, and especially the Aircraft Manufacturers' Association should not object to the sales in question and endeavor through, political influence to prevent these sales, Col. Glover and Col. Davis agreed that it might be good policy to discuss the question with the representative of the Aircraft Manufacturers' Association, and possibly with some of the manufacturers in question. Following this idea, Col. Davis called Mr. Bradley, secretary of the Aircraft Manufacturers' Association, Mr. Flint, of the L. W. F. Co., and Mr. Houston, of the Wright-Martin Co., to his office for a discussion of the subject. Three or four days later Col. Davis had another conference with Mr. Keyes and Mr. Kepperley, of the Curtiss Aeroplane Co., Mr. Ware, of the Thomas-Morse Co., and Messrs. Mingle and Williams, of the Standard Aeroplane Corporation.

8. Mr. Flint, of the L. W. F. Co., suggested that a corporation be formed to take over from the Government at a fixed lump sum all of the surplus material in question and sell it to the public. The Curtiss representatives promptly made a proposition to take back all of their products. At first thought Col. Davis, in consultation with Col. Deeds, informed these gentlemen that he did not think the War Department would approve returning each manufacturer's products to the said manufacturer, for the reason that such an act would immediately offer an opportunity for criticism on the part of politicians and disappointed buyers and would not consider this phase of the question. However, in conference over the phone, Col. Glover informed Col. Davis that resale to manufacturers was being made by the Director of Sales, that there was nothing wrong in such resales—in fact, that it was highly proper to do so in order that the manufacturer might protect his own product—and authorized Col. Davis to proceed along such lines if by so doing he could more satisfactorily solve the problem.

9. Mr. Flint stated that neither he nor his company would be interested in any material excepting the Hall-Scott motors. Later Col. Gillmore (Chief of the Supply Section) was informed that the Assistant Secretary of War, Mr. Crowell, had notified the board that no sale of aeroplanes should be approved until Mr. Flint had been given an opportunity to bid; that Mr. Flint had stated to Mr. Crowell, at the Aircraft Show held in New York March 1 to 15, that he desired to bid. Mr. Flint was called on the telephone and denied that he had made this statement, later said he would bid, and would present his bid to the Director of Air Service not later than Monday, March 10. He failed to do so. He was again called on the telephone and stated he would not bid.

10. Messrs. Mingle and Williams have made a tentative offer on the standard planes and a quantity of Curtiss OX-5 motors. They have made no definite offer. Their tentative offer is not as high as the Curtiss offer for the same material. The offer of the Curtiss Aeroplane & Motor Corporation is the only definite offer for any large quantity of this material that has been received.

11. Following the conference with the Curtiss representatives above referred to, draft of contract was prepared and agreed to by Mr. Kepperley, representing the Curtiss Co. The whole matter was then presented to your Mr. Morse, Col. Boggs, and Col. Glover, who expressed the belief that the sale was an advantageous one for the Government. Some changes in the form of the contract were suggested by your Mr. Schultz (attorney for the board), which were agreed to by Mr. Kepperley. I then sent forward my letter of March 8, which was delivered to your board on March 10.

12. A representative of your board called at this bureau and made a most thorough investigation of the amount and condition of aerial material. I am informed members of your office have had several long conferences with representatives of the purchaser, and that values, state of repair, probable profits, and kindred subjects have been most thoroughly discussed.

13. My reasons for adopting the plan of sale now proposed are: (a) It brings the Government the most money for this surplus aerial material; (b) it saves the Government from liability for damage claims, because of defective material sold to individual purchasers; for claims for infringement of patents, etc.; (c) it obviates the expense of "peddling" these planes and motors; (d) it most quickly relieves storage facilities; (e) it will aid the development of the aeroplane industry in this country; (f) it met with the approval of your Mr. Morse, Col. Boggs, Col. Glover, and Mr. Schultz.

14. The assurance I have "that the price the Government is receiving is a fair one" is that all reasonable effort has been made to secure purchasers: that Curtiss is the only one we can secure, and the price named in the contract is the best we can get them to offer.

15. As pointed out above, your board has made a thorough investigation of the value of this property, expense of overhauling, and the like, and has compiled a statement of values. This was presented to Col. Davis, of the Air Service, and he remarked that it was a fair estimate, except as to 716 JN-4 planes and the 1,100 standard planes, and as to these, that they have no value.

16. As to figures indicating "the probable cost to the contractor of placing the planes and engines in selling condition," no accurate data are available. It will not be less than \$400 for a plane complete and \$250 for a motor. The cost of materials, the price of labor, and the newness of the industry lend uncertainty to figures on this subject. Probably the average cost of overhauling these planes complete will be about \$800, and motors about \$500.

17. As to "dealer's profits," "manufacturing profits," and "overhead charges," I have no data. The aeroplane industry is new, and what those costs will be, I can not say. They must of necessity be high. Demonstrating fields must be maintained, in many instances the purchaser taught to fly, and a competent corps of high-priced mechanics, pilots, and salesmen, with liberal expense accounts, must be retained.

18. The Curtiss Co. will not execute this contract without the exclusive option clause. They maintain they can not realize a profit on this contract, but that it is entered into to protect the Curtiss name; that they do not want a Curtiss plane or motor sold that is not in proper condition to fly, or sold to some one who can not fly it.

19. The JN-4 planes, proposed to be sold, are not new, are either obsolete or obsolescent type. The standard J-1 planes are obsolete. There are no new planes and but 212 new motors in the lot proposed to be sold. No comparison with \$8,000 catalogue price of Curtiss plane is possible.

20. I am informed that there is urgent need for prompt action in this case. I believe your Mr. Schultz has approved draft of proposed contract, and I again state that I deem it expedient and for the best interests of the Government that this sale be consummated upon the terms and conditions set forth in draft of contract, and renew the recommendation made in the first paragraph of my letter of March 8, 1919.

CHAS. T. MENOHER,

Major General, United States Army.

MAY 3, 1919.

From: Office, Director of Air Service.

To: Mr. C. W. Hare, Director of Sales, Munitions Building, Washington, D. C.

Subject: Proposed sale to Curtiss Co. of airplanes and engines.

1. I have delayed replying to your letter of April 29 pending result of a conference with Mr. Keys, of the Curtiss Co., who telephoned me April 30 that he desired to see me regarding this subject.

2. As you know, the Curtiss Co. is now ready to renew negotiations for the purchase of the surplus JN-4 planes, Standard J-1 planes, and the OX-5 engines. I have always felt that this sale to the Curtiss Co. would be for the best interests of the Government for many reasons, chief among which are a saving to the Government of storage charges, saving on cost of upkeep of the planes in storage, and due to the neutral decrease in value of these planes and motors if held for any length of time owing to deterioration and becoming more obsolete, it would be better to sell at this time.

3. By selling to a reputable manufacturer, the planes can be retailed to the public with the manufacturer's guaranty back of them. If the Government attempted to retail these planes it would, in my opinion, lead to an infinite amount of trouble. Civilians purchasing planes would want spare parts; the Government has none available. Any accidents to individuals purchasing planes from the Government bring criticism upon the War Department for selling second-hand planes.

4. In the conference held with Mr. Keys this date after he had visited your office, it was apparent that the Curtiss Co., is now willing to sign the contract with certain changes, which have been agreed upon by your Col. Glover, Mr. Keys, and Col. Gillmore of the Air Service.

C. T. MENOHER,

Major General, U. S. Army, Director Air Service.

MAY 20, 1919.

Sale of material.

The DIRECTOR OF SALES,
Purchase, Storage and Traffic Division, General Staff,
Washington, D. C.:

1. Pursuant to instructions from your office, the contract for the sale of material to the Curtiss Aeroplane & Motor Corporation has been rewritten, and draft of same is submitted herewith.

2. It is again recommended that the Director of Air Service be directed under authority of the Secretary of War, pursuant to the provisions of an act of Congress approved July 9, 1918 (Public, No. 193, 65th Cong., p. 6), to sell to the Curtiss Aeroplane & Motor Corporation the following property:

- (1) 4,608 Curtiss OX-5 motors.
- (2) 1,616 JN-4 Curtiss type aeroplanes, without motors.
- (3) 1,100 standard J-1 aeroplanes, without motors.

And it is further recommended that the attached draft of contract for the sale of the above property be approved, and that the Director of Air Service be directed to execute and deliver same as contracting officer.

3. In answer to your letter of May 17, in reference to this subject, the representations made in my letters dated March 8, 24, and 28 as to the character of this material are correct. It was not my understanding that under the original contract the Curtiss Aeroplane & Motor Corporation were to receive any new planes, and but 212 new motors. The new planes and additional new motors included in this contract have been included since the arrangements were made to take a joint inventory, and set aside for sale to Curtiss the run of the field as to planes and motors. It was not my intention to include new crated planes and motors in this inventory, but the Curtiss representative states that it was his understanding that those set aside were to include new as well as old. As to the newness of the material, this contract is now different from that formerly presented to you.

However, if 246 new JN-4 planes and 644 new OX-5 motors are sold the Air Service will have a sufficient amount of this type of material for its present needs and prospective purposes. Should the Air Service again enter upon an extensive training program a better type plane and motor are available, and it is my belief that before long further desirable planes and motors for military purposes will be obtainable.

4. I do not wish to be understood at present or from any of my previous letters that all of this material is worn out. Much that has been used is in a very good state of repair. The JN-4 plane and OX-5 motor have been valuable training material, but they are rapidly becoming obsolete. The standard J-1 plane is not a desirable plane for any military purpose.

5. As to price, the Curtiss Co. insists that it will not pay more. No other company has bid on this amount of material or any considerable portion of it. There is a question as to the right of the United States to sell the JN-4 plane and OX-5 motor as Curtiss type material, for the reason that a very small per cent is in truth made by the Curtiss Co.

6. I do not think this trade is as desirable for the Government as the previous one would have been, but all things taken into account, I think it is the best that can be done at this time, and I therefore recommend it.

7. The basis of the designation of the surplus was the action of the board of officers who considered the needs of the training program in so far as JN-4 planes and OX-5 motors were concerned, and who are of the opinion that the amount designated was surplus. There will be left in the possession of the Air Service approximately 2,000 Curtiss-type training planes, consisting of JN-4 D's and JN-4 H's, and approximately 3,750 OX-5 motors.

8. It is my opinion that if the Air Service is to be required to furnish the militia planes for training purposes, that the number required to be furnished should be deducted from the total number of planes and motors declared surplus. This opinion is based upon the assumption that the Air Service will consist of the personnel recommended by the General Staff.

CHAS. T. MENOHER,
Major General, United States Army, Director of Air Service.

APRIL 29, 1919.

From: Director of Sales.

To: Maj. Gen. C. T. Menoher, Director of Air Service, Washington, D. C.

Subject: Curtiss Aeroplane & Motor Corporation.

1. In order that you may fully understand the position of this office regarding the negotiations with the Curtiss Aeroplane & Motor Corporation concerning certain planes and motors, I am attaching hereto copies of the following: (a) Letter from Mr. Keys dated April 14 to which is attached a copy of his letter to you dated April 14; (b) My reply to above, dated April 18; (c) Letter from Mr. Keys dated April 22, in reply to my letter of April 18; (d) My letter dated April 29, which is to-day being sent to Mr. Keys in reply to his of the 22d.

2. I shall be glad to have your suggestions in this connection.

C. W. HARE, *Director of Sales*

APRIL 14, 1919

Mr. C. W. HARE,

Director of Sales, Washington, D. C.

DEAR SIR: I am inclosing herewith copy of letter written to-day to Maj. Gen. C. T. Menoher, Director of Air Service, stating that Curtiss Aeroplane & Motor Corporation can not see its way clear to purchase certain surplus aeroplanes and motor materials owned by the Government and setting forth the reason for this inability.

Regretting the outcome of these negotiations,

Yours, very truly,

C. M. KEYS.

Vice President Curtiss Aeroplane & Motor Corporation

WASHINGTON, D. C., April 14, 1919

Maj. Gen. C. T. MENOHER,

Director of Air Service, Washington, D. C.

DEAR SIR: After protracted negotiations, I have to-day stated to the representatives of your department, and also to the representatives of Purchase, Storage and Traffic in conference with me on this subject, that the Curtiss Aeroplane & Motor Corporation can not see its way clear to purchase the surplus aeroplane and motor materials which have been the subject of these negotiations.

I beg leave to lay before you, as a matter of record and solely to avoid needless misunderstandings, the reason for this decision.

When we entered into this trade early in February it was clearly and definitely understood both by your department and by me that the Curtiss Corporation was making an offer for the entire surplus of Curtiss type Army training planes and motors and this clear understanding took the form in the original memorandum of an agreement that the Army would not sell for two years any additional Curtiss planes and motors of similar type. This was in fact the very heart of the entire trade. We were not making this offer because we wanted the material, but because we wished to protect, even at very great risk, the name, the market, and the very life of the Curtiss organization.

The Government has to-day informed me that it will not enter into any agreement not to sell additional Curtiss type training planes and/or motors, and has definitely stated that, while it will give to us an option to purchase such planes and/or motors when, as, and if it should decide to sell, it will reserve the right in case we cannot or do not care to exercise that option to sell such additional planes and/or motors in the open market.

This decision has removed the only sound business reason we had for even proposing a purchase of this material in bulk. To make such a purchase under such conditions would be little short of business suicide, as a very slight change in the operating policy of your department might at any time during the life of the proposed contract leave us committed to purchase month by month a large amount of material when the markets for such material, in the very likely case that we were at that time unable to make new commitments, would be entirely preempted by the Government itself.

Please accept my sincere regret that this trade, which has seemed to me at all times to be exceedingly advantageous to the Government and hardly even a fair business risk for the Curtiss Corporation, is impossible of consummation. Accept also the assurance of the officers of the Curtiss Corporation that we shall cooperate

the extent of our power in any steps that your department may see fit to take in disposing of this surplus material.

Very truly, yours,

C. M. KEYS,
Vice President Curtiss Aeroplane & Motor Corporation.

52 VANDERBILT AVENUE, New York, N. Y.

APRIL 18, 1919.

Mr. C. M. KEYS,
*Vice President Curtiss Aeroplane & Motor Corporation,
52 Vanderbilt Avenue, New York, N. Y.*

MY DEAR SIR: This is to acknowledge receipt of your letter of April 14, together with copy of your letter of the same date to Gen. C. T. Menoher, director of Air Service, in which letter you advise that the Curtiss Aeroplane & Motor Corporation can not see its way clear to purchase certain airplanes and motors owned by the Government.

It is extremely difficult for myself and my associates to understand your attitude, as expressed in your letter to Gen. Menoher. As you know, the original contract prepared by the office of the director of Air Service, after consultation with your representatives, was not acceptable to this department and therefore another form of agreement was drawn up and submitted to your company for signature. The terms of this latter contract were not satisfactory to your company, and therefore yourself, as vice president, and Mr. Mountain, as chairman of the board, of the Curtiss Aeroplane & Motor Corporation, called on Col. Glover of this department and stated your objections to him, whereupon Col. Glover arranged for a meeting between yourself, Mr. Mountain, Col. Glover, and myself. This meeting was held in my office April 7.

At this meeting, after a complete discussion, it was agreed that a new contract would be drawn, differing somewhat from the last proposed contract, and in three respects to be in substance as follows:

First. A surety bond was to be furnished by the Curtiss Co. in the amount of \$250,000.

Second. Before the new contract was signed, an inventory of the planes and motors to be sold would be taken, and a schedule describing this specific inventory would be attached to the new contract. In this manner the specific material to be purchased by your company would be itemized and definitely described in order to avoid any possible further dispute as to what your company had agreed to purchase and the War Department had agreed to sell.

Third. The clause concerning the sale of additional Curtiss airplanes or motors was to be changed to read somewhat as follows:

"No additional planes or motors of the Curtiss type will be sold by the Government for a period of two years from this date unless first offered to the Curtiss Co. at the price agreed to by a representative of the Curtiss Co. and a representative of the Government. If these two disagree they shall elect a third person to vote with them, and a majority vote of this committee will establish the price at which the planes and motors are to be offered to Curtiss. If they refuse to purchase at this price, the Government will have the right to sell on the open market."

There can be no question but that the points above mentioned were discussed and agreed to fully by all parties present. Mr. Mountain stated that it was not the intent of the Curtiss Aeroplane Corporation to prevent the Government from selling any other Curtiss planes or motors, provided Curtiss was not willing to buy the planes at a fair price, and he stated that if these planes and motors were first offered to the Curtiss Co. at a fair price, the Curtiss Co. could have no objection to the United States Government selling them if the Curtiss Co. did not care to purchase. He further stated that the proposed manner of arriving at a fair price was entirely satisfactory to your company.

It was further decided at this meeting that yourself and Mr. Mountain with Col. Glover would immediately go to the office of the director of Air Service in order to make arrangements with Col. Gilmore and Col. Davis of that office for the taking of the inventory, and that pending the completion of the inventory, the new contract would be prepared conforming to the understanding arrived at at the meeting in my office.

After your visit to Col. Gilmore's office with Col. Glover, he advised the assistant director of sales by a memorandum regarding the arrangements there made, and Col. Glover advises me that he read a copy of this memorandum to you when you returned to his office a day or two later, and that you agreed that the understanding was as expressed therein. In order to refresh your memory, I attach hereto a copy of this memorandum.

Inasmuch as the terms of the proposed contract conform in every detail to the agreement reached in my office on April 7, it is a decided surprise to me to find that you are

now unwilling to sign a contract in conformance with that agreement. I gather from your letter that your reluctance is based on the uncertainty as to the number of additional machines which may be declared surplus during the next two years. If that is the case, it may well be that we can set an outside limit at this time on the extent of such prospective surplus, so that the uncertainty to which you object can be substantially eliminated. I will have investigations made along this line in the Air Service and in these a submission of your ideas at a conference in the immediate future would be helpful.

Yours, very truly,

C. W. HARE, *Director of Sales*

NEW YORK, April 22, 1919.

Col. C. W. HARE,
Director of Sales, Washington, D. C.

MY DEAR SIR: I beg to acknowledge receipt of your letter of April 18, which reached my desk this morning. Please accept my apology for the delay in replying to it.

I agree exactly with clauses 1 and 2 of your summary of the discussion on Monday, April 7. I do not agree with clause No. 3 of your summary. It is only with the clause that I have disagreed.

At the conference held April 14, at which there were present Mr. Schultz, of your department, Col. Gilmore, of the Air Service, myself and others, we had no difficulty in agreeing on all the terms of the contract dated March 8, 1919, until we came to clause No. 19, the so-called "option clause." It is upon this clause that I think your office has misunderstood the nature of the entire transaction and has also misunderstood the attitude of Mr. Mountain and myself in the conference of April 7, 1919.

Please refer to contract dated March 8, 1919, which was signed by both Government officials and Curtiss Co. officials, but was not sealed and delivered. You will find the clause on page 9 of the draft of that contract. The wording of this clause begins:

"Exclusive option for two years from the date of this contract is hereby given to the purchaser to purchase any or all Curtiss type motors or aeroplanes, or both, now owned by the United States of America and not sold by this contract."

Nowhere in that clause is it intimated that if the Curtiss Co. does not take the machines the machines will be sold. At no time in any conference have any of the officers of the Curtiss Co. had the idea of binding the Curtiss Co. to take \$170,000 worth of planes and motors per month for 16 months if there was the slightest chance that the Government would sell additional planes and motors of the same type in the open market. I think that Col. Gilmore and his associates will bear me out that at no time, either during the early negotiations or during the late negotiations, has been the understanding, either of the Curtiss Co. or of the Air Service officials, that any such contract would be made; such a deal would be so manifestly unjust and dangerous to us that I find it difficult to understand how anyone could, after due consideration, expect us to make such a deal. Certainly the contract of March 8 did not contemplate such freedom on the part of the Government. An exclusive option such as is expressly described in clause No. 19, certainly does not contemplate that this material could be sold by the Government to anyone if we were unable to take it at the time.

When we reached the discussion of clause No. 19 at the conference on April 14, I asked the question why, in my absence in the South, due to a bad attack of influenza, the original language of this agreement had been abandoned. In my original letter of confirmation to Col. Gilmore, dated early in February, this agreement was stated as an agreement that the Government would not sell any more Curtiss products of this type during a period of two years. The reply to my question on April 14 was that it seemed much better from the Government point of view to provide that the Government could sell such products if we were willing and able to buy them at the time, and this was understood to be the intention, both of the Government and ourselves, in the drafting of clause No. 19.

I note the memorandum of April 7, addressed to Col. Boggs and read to me by Col. Glover. I remember the memorandum very well, but am sorry to say that I did not pay very much attention to it as my understanding was quite clear that whatever changes were going to be made in the contract of March 8, 1919, would be made in the conference which we arranged, on the same day that Col. Glover read me this memorandum, to be held on Monday, April 14. I think my inadvertence in not paying attention to this memorandum deserves an apology, which I am very glad to make to your department herewith.

Is it not possible that your department has, from the beginning, misunderstood the basis upon which we entered into this deal? We do not want 2,700 planes and 4,000

motors. We said we would buy them only because they were the entire surplus, and because, by taking this, for us, very large risk we think we may be able to take care of ourselves in the market, and for no other reason.

I shall hold myself ready to come to Washington in quick response to a telegram at any time, and will be glad to do all I can do to clear away any misunderstandings.

Please address me as below, as I shall receive messages more quickly that way.

Yours, very truly,

CURTISS AEROPLANE & MOTOR CORPORATION.
C. M. KEYS, *Vice President.*

60 BROADWAY, *New York, N. Y.*

APRIL 29, 1919.

From: Office Director of Sales.

To: Curtiss Aeroplane & Motor Corporation, 60 Broadway, New York, N. Y. Attention, C. M. Keys, vice president.

1. I am in receipt of your letter of April 22 and can not lay this matter aside without again calling to your attention the facts in the case as we understand them.

2. The clause contained in the first proposed contract which came to my attention and which, as I understand, was passed to us by the office of the Director of Air Service, reads in part as follows:

"Exclusive option is hereby given to the purchaser to purchase any or all Curtiss type motors or aeroplanes, or both, now owned by the United States of America, and not sold by this contract, at the price set out in the schedule shown in paragraph 3 hereof. Such option shall be binding upon the parties hereto for a period of two years from this date. The purchaser's election to so purchase shall be evidenced by notice in writing, delivered to the contracting officer, setting forth the property so elected to be purchased. Such election shall not become effective, however, until the contracting officer shall determine, and notify the purchaser, that it is expedient and for the best interest of the United States of America that the property so elected to be purchased should be disposed of by it."

3. This department could not sanction the signing of a contract containing any such clause, as it is obviously unfair to the Government for two reasons:

First. The price established for material to be sold in the future was based on the present value and condition of material now being sold, regardless of the value and condition of the material which might be sold at a later date.

Second. If the Curtiss Co. did not care to purchase these planes the Government would have not right to sell, and would be forced to keep these planes for a period of two years, although they might be of no possible use to the War Department and would deteriorate rapidly and perhaps be valueless at the expiration of the two-year period.

4. These matters were explained to you in our meeting of April 7, and both yourself and Mr. Mountain agreed that a clause, in substitution of the above, would be satisfactory if drawn substantially as follows:

"No additional planes or motors of the Curtiss type will be sold by the Government for a period of two years from this date unless first offered to the Curtiss Co. at the price agreed to by a representative of the Curtiss Co. and a representative of the Government. If these two disagree they shall select a third person to vote with them and a majority vote of this committee will establish the price at which the planes and motors are to be offered to Curtiss. If they refuse to purchase at this price the Government will have the right to sell on the open market."

5. The subject matter of the above clause was discussed not only in my office but after you passed from my office to Col. Boggs's office. Col. Glover, in the presence of Mr. Schultz, Col. Boggs, yourself, and Mr. Mountain, reiterated the substance of this clause which would be inserted in the new contract and Mr. Mountain then stated that this clause would be entirely satisfactory to the Curtiss Co. and that they could in no wise object to the Government selling these planes if the refusal of them, at the appraised price, was first given to the Curtiss Co.

6. This department does not deny that your company desired the exclusive option clause as originally drawn and you certainly can not deny that this original clause was not satisfactory to this office. This point was so clearly brought out in our meeting of April 7 that it seems impossible that there could be a misunderstanding on this point.

7. However, we seem now to have arrived at a definite disagreement on this point and I have the following suggestions to offer:

8. Inasmuch as your representatives are now assisting Air Service in taking the inventory of the machines which were contemplated to be sold to your company, would

it not be well to hold this matter of the sale of the machines in abeyance until this inventory is completed? Information may be gained, while taking the inventory, which will change both the attitude of your company and that of the Government, as very naturally the condition of the planes which the Air Service is willing to sell may influence our viewpoint one way or the other to such an extent that an entire reconsideration of the matter may be necessary.

9. In the meantime, would it not be well for you to get in touch with the Chief of the Air Service in order to ascertain whether or not in your opinion there is liable to be a greater surplus of Curtiss type planes and motors than is now under consideration. If you find, after a thorough discussion of the subject, that a larger surplus is highly improbable, you would doubtless be willing to enter into a contract without insisting on the exclusive option clause. If, on the other hand, you found that a much larger surplus might be declared, you would perhaps be unwilling to enter into a contract to take all of this surplus at any price.

10. Another reason which causes us to ask you to hold this matter in abeyance until the inventory is completed is that there now seems to be a probability of the surplus being diminished rather than increased, and if this should prove to be the case we presume you would be entirely willing to enter into a contract in accordance with the option clause as proposed by us.

11. We, of course, appreciate that any further delay is irksome to your company, but we believe the delay is unavoidable, under the circumstances, much as it is to be regretted. If you see any other way to come to a quicker understanding, I would be very glad, indeed, to have you call on me at any time in order that we may discuss the situation thoroughly.

C. W. HARE, *Director of Sales.*

MAY 12, 1919.

Memorandum for Mr. Hare.

1. Following is a digest pertaining to the sale to the Curtiss Aeroplane & Motor Corporation of certain airplanes and motors:

2. Material proposed to sell is as follows:

- (1) 4,608 Curtiss OX-5 motors.
- (2) 1,616 JN-4 C type airplanes without motors.
- (3) 1,100 standard J-1 airplanes without motors.

3. These planes are all surplus in the Army, according to Gen. Menoher, Chief of the Air Service, and are all of the Curtiss type and standard type which the Army can sell at this time, the Air Service having retained for its use sufficient planes and motors of this type to last them for two years, provided Congress passes the bill authorizing an Air Service with 24,000 men and officers.

4. There is a possibility that some of these planes may be required for the use of the militia, should Congress pass such a bill. Inasmuch as no one knows what Congress will pass on the militia, it is questioned whether or not any of the above material should be held pending the passing of some such act. If none is to be held, these planes and motors are surplus in the Army and should be sold. The Curtiss Co. offer us \$2,720,000 for all of this material. There were many provisions in the first contract drawn which were not acceptable to this office, but the contract now is in proper shape, in my estimation, provided we wish to sell the planes. This copy will be submitted to you within a day or two.

5. The material to be sold cost the Government over \$20,000,000, and we are receiving an extremely low price compared to the cost, but this material is worth the amount it will bring, and it is believed that Curtiss has offered more than the Government can realize by selling or attempting to sell to other people. Their interest is in protecting their market.

6. Lieut. Disette advises that about 1,000 inquiries have been received on three types of planes and motors, and a digest showing the result of his investigation on the inquiries is attached hereto. Considering his investigation, the writer still believes that the Government will receive a larger amount from Curtiss than if it sells to other parties. Doubtless 300 or 400 planes could be sold at a higher price to aviators and promoters of flying schools, etc., but it is believed that great difficulty would be experienced in getting rid of all the planes and motors under consideration. Naturally it is impossible to state definitely which method will bring the greatest net return.

7. I believe the contract as now being drawn is a businesslike contract and protects both parties and expresses the intent of both parties.

8. The material to be sold is partly new and partly used. The contract calls for the delivery of the specific planes as have been inventoried and states that of the deliveries in any one month not more than 14 per cent of the motors shall be new and

of the total delivery of planes in any one month not more than 11 per cent shall be new JN4-D's, not more than 36 per cent shall be of the used JN4-D's, not less than 13 per cent shall be of the used JN4-A, JN4-B, and Canadians, and not less than 40 per cent shall be of the standard J-1's. To the contract will be attached a definite schedule giving the numbers on the motors and the numbers on the planes which are to be delivered, and Air Service states that these planes and motors have been inventoried and that they do run in the percentages as stated above.

9. The contract also provides that if any further surplus of the Curtiss type planes is declared the Curtiss Co. shall have the right to buy these, provided they will pay the price asked for by the contracting officer. In the event they do not buy, either party may declare the contract canceled, excepting as to the part already performed. I believe this provision is fair and can do no harm to the Government.

10. No doubt there will be criticism from many quarters after this contract is signed on account of the low price, but there will also be criticism if this contract is not gone through with, for the reason that we will have great difficulty in disposing of this material to other parties. Gen. Menoher and his assistants believe that it is a good deal for the Government, and they should know the condition, etc., of the material being sold.

F. GLOVER,
*Colonel, Quartermaster Corps,
Assistant Director of Sales.*

WAR DEPARTMENT,
Washington, D. C., May 19, 1919.

Memorandum for the Assistant Secretary of War.

The Curtiss Aeroplane & Motor Corporation have, as you know, made an offer to purchase 4,608 Curtiss OX-5 motors, 1,616 JN-4 Curtiss type aeroplanes without motors, and 1,100 standard JN-1 aeroplanes without motors, which have been declared surplus by the Air Service, for the sum of \$2,720,000. This material cost the Government approximately \$20,000,000.

As the price the Government was to receive for this equipment was so small, I addressed a letter, under date of March 20, copy of which is attached hereto and marked "Exhibit A," to Gen. Menoher, Chief of Air Service, and received in reply a letter from him, under date of March 24, copy of which is attached hereto and marked "Exhibit B," in which he makes the statement under paragraph 19 thereof:

"The JN-4 planes proposed to be sold are not new, are either obsolete or obsolescent type. The standard J-1 planes are obsolete. There are no new planes and but 212 new motors in the lot proposed to be sold. No comparison with \$8,000 catalogue price of Curtiss plane is possible."

When the contract, as prepared by the Curtiss Aeroplane & Motor Corporation, in conjunction with officers of the Air Service, was submitted to this office, it was found to contain an exclusive option clause giving the Curtiss Co. the right to purchase at any time within the next two years any additional planes that might be declared surplus by the Army at the average price agreed upon under the proposed contract.

Our legal advisers told me that we could not properly accept such an exclusive option clause, and I therefore sent for Mr. Keyes, vice president of the Curtiss Co., and told him that while we would be perfectly willing to offer first to the Curtiss Co. any planes that might during the next two years be declared surplus, that if they declined to buy them at a fair market price the Government must retain the right to dispose of them in some other way.

Mr. Keyes informed me that they would have to be given some definite assurance that they could control the market for any additional surplus Curtiss planes, as that was one of their principal reasons for entering into the contract. He further stated that he had just discovered that certain of the planes which he had contemplated purchasing under the proposed contract had been damaged at some of the fields and that therefore he desired a careful inventory taken before negotiations were proceeded with.

We then made arrangements to have a representative of the Curtiss Co. and a representative of the Air Service visit the various fields and pick out the planes which it was proposed that the Government should sell to the Curtiss Co.

In the meantime a new contract was prepared which gave the Curtiss Co. the right to terminate the contract immediately upon the declaration of additional surplus planes by the War Department during the period of the contract, and gave the Government the right to terminate the contract at the expiration of 30 days after the declaration of such surplus, provided that within that period the Curtiss Co. did not

agree to purchase the additional planes at a fair market price; the Curtiss Co. of course, to pay for all planes delivered up to the time of the cancellation of the contract.

The purpose of this clause in the contract was in effect to give both the Curtiss Co. and the Government an opportunity to discuss the terms of a further sale of surplus when such an occasion might arise. If no proper agreement could be reached with the Curtiss Co. it enabled the Government to dispose of this surplus in some other direction.

The inventory of the planes to be taken by the Curtiss Co. under the contract has just been completed, but unfortunately this record is in no shape to adequately determine the actual condition of the planes to be sold. A certain number of new planes are designated and a certain number of second-hand planes are designated, but we have no means of knowing whether or not many of these so-called second-hand planes have been flown for more than an hour or two. A proportion of them may be to all intents and purposes practically new, and immediate arrangements have been made to have a more accurate estimate of their condition arrived at.

The fact that new planes are to be included in the contract for sale is contrary to the understanding had with Gen. Menoher when the original contract was under discussion, as you will note in paragraph 19 of his letter of March 24 he states, "There are no new planes."

The Curtiss Co., however, stated that it had always been their understanding that they were to secure under the contract a certain proportion of new planes.

Another complication, however, has arisen due to the fact that it seems highly probable that Congress will pass the necessary legislation to have the War Department supply, in so far as it can from surplus stock, the requirements of the Militia Bureau for aeroplanes of various types and I have therefore addressed to-day a letter to Gen. Menoher, copy of which is attached hereto and marked Exhibit "C," and am addressing this memorandum to you with the thought in mind that you may desire to take this entire question up with the Secretary of War in order that he may discuss it with members of the Military Affairs Committees of the House and Senate.

While it is true that a careful study of the entire situation has been made in so far as developing markets for these surplus planes, and no one has come forward and offered as a good a price for all of these planes as has the Curtiss Co., it is still of course obvious that the price offered by the Curtiss Co. is exceedingly low and if it is thought that within a reasonable period of time the Militia Bureau will be in the market for similar training planes it might be well for the War Department to hold these planes in stock until the requirements of the Militia Bureau are known.

On the other hand, it must not be lost sight of that the aeroplane industry is in its infancy and will require the support of the Government if it is to thrive. The Curtiss Co. have from the nature of their contracts with the Government been unable to manufacture any aeroplanes to sell on their own account, and I learn from Mr. Keyes that one of the principal reasons for securing these planes from the Government at this time is to enable the Curtiss Co. to compete with aeroplanes of foreign manufacture at present being sold in China, South America, and elsewhere. If the Curtiss Co. is not put in a position to meet this competition promptly at this time it is feared that this market will be, temporarily at least, lost to American trade.

You will see from the above that the entire question is quite an involved one and involving, as it does, other policies than those directly connected with the office of the director of sales, I feel that this entire question should be brought to the attention of the Secretary of War for such action as he may deem advisable under the circumstances. May I suggest that a prompt decision be reached in view of the fact that Mr. Keyes is planning to sail for Europe on May 24.

C. W. HARR,
Assistant Director of Munitions

May 20, 1915.

SALE OF MATERIAL.

THE DIRECTOR OF SALES,
PURCHASE, STORAGE, AND TRAFFIC DIVISION, GENERAL STAFF,
Washington, D. C.

1. Pursuant to instructions from your office, the contract for the sale of material to the Curtiss Aeroplane & Motor Corporation has been rewritten, and draft of same is submitted herewith.

2. It is again recommended that the Director of Air Service be directed, under authority of the Secretary of War, pursuant to the provisions of an act of Congress approved July 9, 1918 (Public—1913—65th Cong., p. 6), to sell to the Curtiss Aeroplane & Motor Corporation the following property:

- (1) 4,608 Curtiss OX-5 motors.
- (2) 1,616 JN-4 Curtiss type aeroplanes without motors.

(3) 1,100 standard J-1 aeroplanes without motors.

And it is further recommended that the attached draft of contract for the sale of the above property be approved, and that the Director of Air Service be directed to execute and deliver same as contracting officer.

In answer to your letter of May 17 in reference to this subject, the representations made in my letters dated March 8, 24, and 28, as to the character of this material are correct. It was not my understanding that under the original contract the Curtiss Aeroplane & Motor Corporation were to receive any new planes, and but 212 new motors. The new planes and additional new motors included in this contract have been included since the arrangements were made to take a joint inventory, and set aside for sale to Curtiss the run of the field as to planes and motors. It was not my intention to include new crated planes and motors in this inventory, but the Curtiss representative states that it was his understanding that those set aside were to include new as well as old. As to the newness of the material, this contract is now different from that formerly presented to you.

However, if 246 new JN-4 planes and 644 new OX-5 motors are sold, the Air Service will have a sufficient amount of this type of material for its present needs and prospective purposes. Should the Air Service again enter upon an extensive training program a better type plane and motor are available, and it is my belief that before long further desirable planes and motors for military purposes will be obtainable.

4. I do not wish to be understood at present or from any of my previous letters that all of this material is worn out. Much that has been used is in a very good state of repair. The JN-4 plane and OX-5 motor have been valuable training material, but they are rapidly becoming obsolete. The standard J-1 plane is not a desirable plane for any military purpose.

5. As to price, the Curtiss Co. insists that it will not pay more. No other company has bid on this amount of material or any considerable portion of it. There is a question as to the right of the United States to sell the JN-4 plane and OX-5 motor as Curtiss type material, for the reason that a very small per cent is in truth made by the Curtiss Co.

6. I do not think this trade is as desirable for the Government as the previous one would have been, but all things taken into account, I think it is the best that can be done at this time, and I therefore recommend it.

7. The basis of the designation of the surplus was the action of the board of officers who considered the needs of the training program in so far as JN-4 planes and OX-5 motors were concerned, and who are of the opinion that the amount designated was surplus. There will be left in the possession of the Air Service approximately 2,000 Curtiss type training planes, consisting of JN-4 D's and JN-4 H's, and approximately 3,750 OX-5 motors.

8. It is my opinion that if the Air Service is to be required to furnish the militia planes for training purposes, that the number required to be furnished should be deducted from the total number of planes and motors declared surplus. This opinion is based upon the assumption that the Air Service will consist of the personnel recommended by the General Staff.

CHAS. T. MENOHER,
Major General, United States Army, Director of Air Service.

MAY 21, 1919.

Memorandum for the Director of Sales.

Subject: Sale of airplanes to Curtiss Aeroplane & Motor Corporation.

I have examined the attached papers. It seems to me that the sale in question ought to be made. The planes proposed to be sold are, of course, rapidly becoming obsolescent. The opportunity for selling them to individuals is not open to us, nor should the War Department propose to sell airplanes to individuals because of the very hazardous character of their use. Should the Congress decide to direct any comprehensive training of National Guard or other forces in aircraft, a different type of plane ought to be used for that purpose.

NEWTON D. BAKER,
Secretary of War.

Mr. LEA. Do their figures include the number delivered to the Navy?

Capt. SEATON. I will say that of the engines and airplanes produced in the United States, part were for the Navy. As to deliveries from foreign Governments, I have no present information.

Mr. LEA. I call your attention to a statement of production at the top of page 30, of Aircraft Production Facts, as prepared by Col. Mixer, in which statement it appears that the production was divided between different types of engines, as follows:

OX-5.....	8,458
Hispano-Suiza.....	4,100
Le Rhone.....	1,298
Lawrence.....	451
Gnome.....	280
A7A.....	2,250
Bugatti.....	11
Liberty.....	15,572
Total.....	32,420

Can you state whether you believe this statement is approximately correct?

Col. HICKAM. I can. These figures were checked from available records which were used for the history of aircraft production, and were found to be correct in those records.

Mr. LEA. According to the figures here given, the total production of Liberty engines was 15,572, or less than half of the total engine production of the United States during the war.

Col. HICKAM. That is correct.

Mr. LEA. Now, Gen. Menoher, do you not infer from these figures that the widely advertised statement to the effect that the United States aircraft production forces devoted all their energies to the production of the Liberty motor is dispelled by this fact?

Gen. MENOHER. It is not borne out by the fact, as shown by these figures. The aeronautical engineers considered that our record in the production of the Hispano-Suiza engines and Le Rhone engines is very creditable. A comparison of these types with those produced abroad is very favorable to American production. The French engineer who inspected and instructed our industry in the production of Le Rhone engines stated that they were the best produced in the world.

Mr. LEA. I wish, Colonel, that you prepare and present to the reporter for the record a statement of the costs of engines and plane production of the United States with comparative tables of costs as made available in reference to foreign production.

Col. HICKAM. I will do that for you.

(The statement referred to is to be furnished by Col. Hickam, and will be printed hereafter.)

Mr. LEA. I wish, General, you would present to the committee any statement that you may have in reference to the number of fully trained flyers engaged in the war, the number of flyers actually at the front in the A. E. F., at the signing of the armistice, the number contributed for training in the A. E. F., and the number of other administrative duties, and a summary of the above.

Gen. MENOHER. I have the statement here which is compiled from the progress reports of the United States Air Service, A. E. F.

Mr. LEA. I will ask that the reporter place this statement in the record under its proper designation.

(The statement submitted is here printed in full as follows:)

	Pilots.	Observers.	Totals.
Staff and on staff duty.....	103	15	118
Transfer, ferry, tow, and test.....	20	0	20
Instructors.....	107	65	172
With British, French, and Italian forces.....	174	20	194
At the front.....	757	481	1,238
Total.....	1,161	581	1,742

(Above figures compiled from Twenty-ninth Progress Report, U. S. A. S., A. E. F., by deducting casualties, as furnished by Col. Gorrell, from "Distribution of Finished Pilots and Observers.")

Mr. LEA. Can you state the amount of money that was sent overseas out of all the appropriations, also the amounts expended?

Gen. MENOHER. The amount of all moneys authorized for expenditures by the A. E. F., from aviation and air service appropriations, and a statement showing the amount actually transferred to the A. E. F.?

Mr. LEA. What is the total amount sent over seas?

Gen. MENOHER. The total amount sent over seas is \$85,723,175.56.

Mr. LEA. And of that amount, what amount was spent?

Gen. MENOHER. There is also a statement showing the total expenditure of the A. E. F., to and including June 30, 1919, \$63,345,941.77.

There is also a statement showing expenditures up to and including May 31, 1918.

Mr. LEA. What amount was that?

Gen. MENOHER. \$58,655,954.69.

(Statements referred to were submitted by Gen. Menoher and printed in full.)

Attached hereto and marked "Exhibit A" is a statement showing the total amounts of all moneys authorized for expenditures by the American Expeditionary Forces from Aviation and Air Service appropriations, and a statement showing the amounts actually transferred to the American Expeditionary Forces. The total amount transferred was \$85,723,175.56.

Attached hereto and marked "Exhibit B" is a memorandum statement showing the total expenditures of the American Expeditionary Forces to and including June 30, 1919. Total amount, \$63,345,941.77.

Attached hereto and marked "Exhibit C" is a statement showing expenditures up to and including May 31, 1918. Amount expended, \$58,655,954.69.

Authorities: (A) Recapitulation of report of Finance Division. (B) Memorandum to Gen. Patrick under date of July 9, 1919, signed by Maj. H. S. Bacon. (C) Memorandum to Gen. Patrick under date of July 8, 1919, signed by Maj. H. S. Bacon, and memorandum to Col. Dunwoody under date of June 21, 1919, signed by Maj. H. S. Bacon.

*Funds transferred to American Expeditionary Forces.*EXHIBIT A.
RECAPITULATION.

	Amount authorized.	Amount transferred.	Balance.
Air Service production, 1919:			
England.....	\$15,878,700.00	\$15,686,787.56	\$191,912.44
France.....	73,000,000.00	9,999,567.71	63,000,432.29
Italy.....	750,000.00	750,000.00	0.00
Increase for Aviation, Signal Corps, 1918:			
England.....	7,802,310.46	8,395,810.76	
France.....	47,430,000.00	40,739,163.35	6,690,836.65
Italy.....	50,336.20	52,000.00	
Signal Service of the Army, 1917-18:			
England.....	21,000.00	10,298.07	10,701.93
France.....	389,525.90	388,525.90	0.00
Italy.....	0.00	0.00	0.00
Signal Service of the Army, 1918:			
England.....	975,000.00	971,055.50	3,944.50
France.....	7,996,937.78	8,725,966.71	
Italy.....	2,000.00	2,000.00	0.00
Increase of compensation, Military Establishment, 1918:			
England.....	500.00	0.00	500.00
France.....	2,300.00	2,000.00	300.00
Italy.....	0.00	0.00	0.00
Total.....	159,297,610.34	85,723,175.56	74,574,434.78
Balance.....	73,574,434.78		73,574,434.78

EXHIBIT B.

Memorandum for Gen. Patrick:

1. The following report is submitted in accordance with oral instructions from Chief of Air Service:

(a) Total payments made by the Air Service in Europe to and including June 30, 1919:

France.....	\$51,007,299.46
Great Britain.....	10,894,824.90
Italy.....	273,187.44
Spain.....	1,106,766.21
Switzerland.....	63,863.76

Total..... 63,345,941.77

NOTE.—Disbursements for May and June for Great Britain, and June for Switzerland, are not included in above figures, as accounts current have not yet been received in this office.

(b) Estimate of payments still to be made after June 30, 1919:

France.....	\$55,760,000
Great Britain.....	17,810,000
Italy.....	2,380,000

Total..... 75,950,000

NOTE.—Increase in Italian obligations due to difference in rate of exchange.

2. The analysis of disbursements is not available this date, and therefore can not be included in this report. A supplementary report will follow at the earliest possible date, containing analysis of disbursements to and including June 30, 1919.

3. The payments in France and the amount still to be paid in France are divided between French Government and persons and firms as follows:

	Payments.	Estimate of payments still to be made.
French Government.....	\$31,585,742.61	\$55,000,000.00
Persons and firms.....	19,420,558.85	700,000.00
Total.....	51,007,299.46	55,700,000.00

4. The greater part of the Fiat contract and some other disbursements in Italy and in Switzerland were made from Paris and are included under "France" in paragraph (a) above. The important amounts so included are:

	Italy.	Switzerland.
Fiat contract.....	\$2,941,330.00	
Borgo contract.....	26,525.00	
Martini contract.....		\$88,880.00
Total.....	2,967,855.00	88,880.00

5. The estimate of the amount still to be paid in Italy is the net amount after deducting Air Service bills against Italy in the amount of \$1,401,089.96, as it is proposed to deduct this amount from the Italian Government bills before making payment. The estimate of the net amount payable in Italy includes \$255,296.95, which we are to pay for the account of the United States Navy and which will later be reimbursed to the Air Service.

H. S. BACON,
Major, Air Service.

EXHIBIT C.

Memorandum for Gen. Patrick:

1. The following report is submitted in accordance with oral instructions from Chief of Air Service, and is supplementary to our report of June 21, 1919, submitted to Col. Dunwoody, a copy of which is attached.

2. Accounts current have not yet been received from England, therefore the amount, \$10,894,824.90, is still carried and accounted for in analysis of disbursements. Account current for Switzerland has been received subsequent to our report of June 21, and is therefore carried in this report.

3. Total payments made by the Air Service in Europe to and including May 31, 1919:

France.....	\$46,317,312.38
Great Britain.....	10,894,824.90
Italy.....	273,187.44
Spain.....	1,106,766.21
Switzerland.....	63,863.76
Total.....	58,655,954.69

English payments for May not included.

4. The following is an analysis of the payments made to and including May 31, 1919:

General equipment, except for airplanes, engines, and balloons.....	\$6,184,104.79
Transportation equipment.....	5,931,382.94
Aerial ordnance and ammunition.....	470,200.35
Buildings and grounds.....	13,184,948.99
Maintenance and operations of schools.....	114,579.27
Salaries and wages of civilians.....	1,401,938.28
Miscellaneous material for repairs of airplanes.....	197,846.16
Miscellaneous equipment, expenses and supplies.....	2,849,890.68
Oils, gases, and chemicals.....	590,149.20
Miscellaneous supplies and expenses.....	1,145,880.61
Airplanes and spare parts.....	11,664,004.45
Airplane instruments and accessories.....	1,644,030.38
Engines and spare parts.....	10,320,510.99
Engine instruments and accessories.....	117,421.12
Balloons and spare parts.....	572,883.34
Balloon instruments and accessories.....	1,000,522.88
Special clothing for aviators.....	36,433.12
Material purchased for resale.....	964,150.64
Indemnities.....	195,993.06
Training pilots.....	69,083.44
Total.....	58,655,954.69

H. S. BACON,
Major, Air Service.

EXHIBIT C.

Memorandum for Col. Dunwoody.

1. The following report is submitted in accordance with oral instructions from Chief of Air Service, this date.

(a) Total payments made by the Air Service in Europe, to and including May 31, 1919:

France.....	\$46,317,312.38
England.....	11,350,675.03
Italy.....	273,187.44
Spain.....	1,106,766.21
Switzerland.....	49,581.64
Total.....	59,097,522.70

NOTE.—Abstract of disbursements from Great Britain not yet received. Figures are obtained from weekly report of British obligations and disbursements.

(b) Estimate of payments still to be made after May 31, 1919:

France.....	\$62,700,000
Great Britain.....	19,450,000
Italy.....	2,225,000
Total.....	84,375,000

2. The analysis of payments has not been made up to May 31, therefore can not be included in this report.

3. The payments in France, and the amount still to be paid in France are divided between the French Government and persons and firms as follows:

	Payments.	Estimate of payments still to be made.
French Government.....	\$26,973,495.77	\$61,800,000.00
Persons and firms.....	19,343,816.61	200,000.00
Total.....	46,317,312.38	62,700,000.00

4. The greater part of the fiat contract, and some other disbursements in Italy and in Switzerland were made from Paris and are included under "France" in paragraph 1 (a) above. The important amounts so included are:

	Italy.	Switzerland.
Fiat contract.....	\$2,941,330.00	
Borgo contract.....	26,535.00	
Martini contract.....		\$65,000.00
Total.....	2,967,865.00	65,000.00

5. The estimate of the amount still to be paid in Italy is the net amount after deducting Air Service bills against Italy in the amount of \$1,310,961.37, as it is proposed to deduct this amount from the Italian Government bills before making payment. The estimate of the net amount payable in Italy included \$241,469.63 which we are to pay for the account of the United States Navy, and which will later be reimbursed to the Air Service.

H. S. BACON,
Major, Air Service

Mr. LEA. Are you able at this time to give to the committee the number of engines, planes, and airplanes which the United States was under written or implied obligation or agreement to deliver to the allies, showing the figures separately for each nation?

Capt. Seaton. We were under no obligations to furnish planes or airplanes, but were under obligations to furnish raw materials and

engines. A statement is being prepared and will be furnished the committee to-day.

Mr. LEA. I will ask the reporter that when such statement is received he will place it in the record under its proper designation.

(The statements referred to are to be furnished by Capt. Eaton and will be printed in full hereafter.)

SEPTEMBER 27, 1919.

Question (c). The number of engines, planes, and airplanes which the United States was under written or implied obligation or agreement to deliver to the Allies, showing figures separately for each nation?

Answer. *France.* Under date of March 29, 1918, the French high commissioner applied for six Liberty engines. Three signed contracts were returned to him under date of May 6, 1918, covering these engines.

Under date of May 6, 1918, the Secretary of War directed Mr. John D. Ryan to make the necessary arrangements with the French high commissioner to deliver to France, prior to July 1, 1918, 500 Liberty engines, Navy type. On May 14, 1918, Mr. Ryan advised the French high commissioner that not more than 250 engines could be delivered and asked for a definite order. On the same date, the French high commissioner wrote the Secretary of War advising that France needed urgently 400 Liberty motors, Army type, and asked for information as to delivery so he could cable his Government. On May 17, 1918, the French high commissioner wrote Mr. Ryan giving a firm order for 250 engines and requested that a formal contract be drawn. He also referred to a request of May 1 to the Secretary of War for 1,000 Liberty engines and his second request of May 14, for 400 engines, a total of 1,400 engines, the 1,400 to include the 250 engines to be delivered by July 1, 1918, leaving 1,150 engines to be delivered after that date. On May 31, 1918, the French high commissioner wrote stating that the 250 engines should include 100 Navy type, with hand crank (compression 4.8), 100 Navy type, with starting device, air pump, and 50 Army type. Contract for 250 engines was duly signed and deliveries were not expected to be complete before August 1, 1918.

On October 24, 1918, the French high commissioner was advised by the assistant director of aircraft production that Mr. John D. Ryan, while in France, had arranged for the sale to the French of 750 Liberty engines per month for the first six months of 1919, the first deliveries to begin in January, 1919. He was asked if a contract should be drawn covering these deliveries. On October 19, 1918, Lieut. H. H. Emmons, wrote the War Industries Board that no permission should be granted to the French Government to purchase Liberty engines in the United States. It was apparently Lieut. Emmons's understanding that all disposition of the Liberty engines in France was to be made by the American Expeditionary Forces. On November 5, 1918, the War Industries Board notified the French mission that its applications for motors would be held unapproved for the reasons set out in Lieut. Emmons's letter to them. On November 13, 1918, contracts covering the 4,500 engines which Mr. Ryan agreed verbally to deliver to the French in the first six months of 1919, were forwarded to the French high commissioner, who returned them unsigned on November 18, 1918, and directed the cancellation of his demand. On November 27 and 29, 1918, the French high commissioner repeated his refusal to sign contracts for 4,500 Liberty engines.

It seemed to be Mr. Ryan's understanding that the 4,500 engines were to be delivered to the French in the United States and not through the A. E. F. It seemed to be his understanding also that the 1,500 engines to be delivered to the French from October 1 to December 31, 1918, were to be delivered by the A. E. F. The agreement for these 1,500 engines was made at the same time by Mr. Ryan that he made the agreement to deliver the 4,500 engines, and was apparently meant to satisfy the French requests for 1918.

On December 17, 1918, Major Gen. Mason M. Patrick, chief of Air Service, A. E. F., wrote to le sous secretaire d'etat de l'aeronautique Militaire et Maritime, 280 Boulevard St. Germain, Paris, calling attention to the agreement between Mr. Ryan and the French authorities for the delivery of 1,500 Liberty engines by December 31, 1918, and stating that the balance of the engines were ready for delivery, 405 of them having already been turned over. On February 3, 1919, Maj. Gen. Patrick again wrote the Minister of War (12th direction) in regard to these 1,500 engines.

Summary.

FRENCH.

Date.	Requested by French.	Delivered under contract.	To be delivered, verbal contract.
Mar. 29, 1918.	6		
Apr. 16, 1918.		6	
May 1, 1918.	1,000		
May 14, 1918.	400		
July 24, 1918.		31	
To Nov. 11, 1918.		1,405	1,380
To July 1, 1919.	1,500		4,500
Final settlement.		3,133	
Total delivered to French.		3,575	

¹ By A. E. F.² Mr. Ryan.

Final settlement with the French provides for a total payment to the United States of \$21,272,250, which covers 3,575 engines, cancellation indemnity, 3,310 sets of spares, at \$500 per set, and cancellation indemnity.

Great Britain.—On February 27, 1918, Brig. Gen. J. D. Cormack requested the delivery of 3,000 Liberty motors to insure the development of the program of the Royal Air Force, and contract was entered into with the British for 980 Liberty engines—the number allotted by the Adjutant General of the Army. On May 7, 1918, Gen. Cormack reported first successful flight of Liberty motor in a De Haviland—9A.

On July 8, 1918, Capt. E. C. Hugh, for the British, requested to be advised of the next allocation of engines.

On October 24, 1918, Brig. Gen. Cormack was advised of the agreement entered into by Mr. Ryan for the sale of 750 Liberty motors per month for the first six months of 1919, a total of 4,500 motors in all. While in Europe, Mr. Ryan had arranged tentatively for a delivery of 1,000 engines to the British by December 31, 1918, deliveries to be made by the American Expeditionary Forces. On November 8, a verbal agreement was made between the Second Assistant Secretary of War, the acting director of aircraft production, and Sir Charles Gordon, for 500 Liberty engines to be delivered in the weeks ending November 16 and November 23, 1918. Contracts covering 4,500 engines were sent to Gen. Cormack on November 13, 1918. Also contracts were forwarded to cover 500 engines. Neither set of contracts was ever executed.

Final settlement with the British calls for a total delivery of 2,252 engines, including the 980 delivered prior to the signing of the armistice. Great Britain has taken 11 per cent of the total produced and has paid therefor \$16,589,718.90, which also covers spare parts for these engines.

Summary.

BRITISH.

Date.	Requested by British.	Delivered under contract.	To be delivered, verbal contract.
Feb. 27, 1918.	3,000		
July 11, 1918.		980	
Nov. 8, 1918.	500		500
July 1, 1919.	4,500		4,500
Final settlement.		1,272	
Total engines delivered to the British.		2,252	

A contract was entered into with the British for the delivery of one experimental Hispano-Suiza engine of 300 horsepower.

Italian.—Under date of April 5, 1918, a contract was entered into with the Italian Government for the delivery of five Liberty motors—three high compression and two low compression.

Authorities.—(1) Letters exchanged between the French high commissioner, the Secretary of War, and the director of aircraft production.

(2) Letters exchanged between Brig. Gen. J. D. Cormack, British mission, and the director of aircraft production.

- (3) Statement of foreign contracts prepared by the contract section.
 (4) Letters exchanged between the chief of Air Service, A. E. F., and the under-secretary for military-navy aeronautics in France.
 (5) Account of Mr. John D. Ryan's trip in Europe in 1918, by Capt. R. E. Christie.
 (6) The Lockhart report.
 (7) Final settlement agreements.

List of foreign contracts.

BRITISH.

Sale.	Date.	Foreign No.	Material.	Status.
2	Feb. 11, 1918	U. S. 2048 M. A. 51.....	330,000 feet spruce (canceled).....	Canceled and superseded by S-2, dated May 18, 1918.
2	May 18, 1918	U. S. 2048 M. A. 51.....	About 15 cars of silver spruce lumber.	Executed.
16	May 1, 1918	U. S. 31 M. A. 1.....	Not to exceed 36,000,000 feet spruce lumber.	Do.
16-1	July 23, 1918	.....	Modification of specifications for silver spruce.	Do.
17	July 20, 1918	.....	Not to exceed 20,000,000 feet b. m. Douglas fir.	Do.
17-1	Aug. 14, 1918	.....	Amending specifications for Douglas yellow fir.	Do.
20	July 11, 1918	U. S. 4553 M. A. 114A....	980 motors for equipment.....	Do.
23	Aug. 1, 1918	U. S. 6065 B. T. M. A. 11..	200,000 feet silver spruce lumber for hollow span	Do.
24	Aug. 11, 1918	A. S. 3859 M. A. 99.....	400 sets spruce scantlings.....	Do.
25	do.	U. S. 2767 M. A. 65.....	600,000 feet silver spruce lumber.....	Do.
26	Aug. 1, 1918	U. S. 5247 B. T. M. A. 3....	2,300,000 feet silver spruce lumber.....	Do.
27	Aug. 16, 1918	U. S. 7959 M. A. 153.....	300-horsepower Hispano-Suiza engines (only 1).	Do.
28	Aug. 21, 1918	U. S. 8955 M. A. 168.....	2 Marlin machine gun L. c. c. interrupter gear, 5,000 rounds of 30-caliber ammunition.	Do.
29	Sept. 5, 1918	O 3382 A. E. 75-W 1274..	1 Le Pere airplane.....	Do.
30	Oct. 7, 1918	U. S. 4553 M. A. 114c.....	500 Liberty instruction books.....	Do.
31	Oct. 1, 1918	U. S. 4553 M. A. 114b.....	12 sets Liberty motor screwing tackle.	Unexecuted.
33	Nov. 1, 1918	U. S. 4553 M. A. 114-E....	18 sets Liberty motor screwing tackle.	Do.
34	Nov. 14, 1918	.....	4,500 12-cylinder United States engines.	Do.
35	do.	.....	500 12-cylinder United States engines.	Do.
40	Nov. 15, 1918	U. S. Z 2636 B. T. M. A. 62.	Inspection services.....	Executed.

FRENCH.

1	Dec. 17, 1917	(O) 1629 M. A. 696.....	450,000 feet mahogany.....	Executed.
3	Feb. 7, 1918	O 1936 M. A. 696.....	4,050,000 feet Douglas yellow fir.....	Do.
3-A	.....	.....	Supersedes S-3.....	Do.
3-A-1	May 1, 1918	.....	Revision of payment clause.....	Do.
4	Feb. 7, 1918	(O) 1938 M. A. 696-760..	Spruce labor (30 per cent of all United States releases).	Do.
4-A	.....	.....	Spruce labor (30 per cent of all United States releases) (supersedes S-4).	Do.
4-A-1	May 1, 1918	.....	Revision of payment clause.....	Do.
5	Feb. 7, 1918	O 1939 M. A. 760.....	6,300,000 Douglas yellow fir.....	Unexecuted.
5-A	do.	.....	Supersedes S-5.....	Executed.
5-A-1	Apr. 30, 1918	.....	Substitution of payment clause.....	Do.
6	Feb. 7, 1918	O 1937 M. A. 696.....	990,000 feet poplar.....	Do.
7	Mar. 20, 1918	O 2104 M. A. 676 W-195..	900,000 feet mahogany.....	Do.
7-1	May 22, 1918	.....	Reduction in number of feet of lumber.	Do.
7-2	June 18, 1918	.....	Reduction in number of feet of labor and cancels 7-1.	Unexecuted.
8	Mar. 22, 1918	O 2141 M. A. 760.....	450,000 feet mahogany.....	Executed.
10	Apr. 16, 1918	O 2095 A. E. 46.....	6 Liberty motors.....	Do.
10-1	June 3, 1918	do.	Amendment of payment clause.....	Do.
11	Apr. 6, 1918	{ O 2395 M. A. 760..... W 366-368-369.....	2,356,000 feet of mahogany 1.....	Do.
11-1	Sept. 17, 1918	O 2395 M. A. 760.....	Order increased to 2,516,000 feet.....	Do.
12	Apr. 6, 1918	O 2323 M. A. 760-0309..	500,000 feet walnut 1.....	Do.
13	do.	O 2227 M. A. 760.....	9,800 walnut 4 by 4.....	Do.
18	July 29, 1918	O 3248 M. A. 760-B.....	2,544,000 board feet walnut (more or less); may substitute mahogany.	Do.
19	do.	O 3347 M. A. 760 B.....	1,272,000 board feet mahogany (more less).	Do.
21	July 24, 1918	.....	250 Liberty motors.....	Do.
22	Aug. 22, 1918	O 2027 M. A. 760.....	350,000 silver spruce lumber.....	Do.
32	Oct. 17, 1918	3421 A. E. 77-W 1333..	.....	Do.
36	Nov. 14, 1918	.....	4,500 12-cylinder United States engines.	Unexecuted.
37	Nov. 15, 1918	.....	Inspection services (of plywood).....	Executed.

List of foreign contracts—Continued.

ITALIAN.

Sale.	Date.	Foreign No.	Material.	Status.
9	Apr. 5, 1918	.....	5 Liberty motors (3 high compression and 2 low).	Executed.
9-1	June 3, 1918	.....	Amendment of payment clause	Do.
14	Apr. 29, 1918	.....	Not to exceed 24,000 feet Douglas fir	Do.
14-1	Oct. 3, 1918	.....	Modification of specifications	Do.
15	Apr. 29, 1918	.....	Not to exceed 25,000,000 board feet spruce.	Do.
15-1	Nov. 2, 1918	.....	Modification of specifications of 8-15.	Do.
39	Nov. 15, 1918	.....	Inspection services	Unexecuted.

CANADA.

38	Nov. 15, 1918	Inspection services	Unexecuted.
----	---------------	-------	---------------------	-------------

Mr. LEA. Are you in a position at the present moment to furnish me the figures as to the production of balloons, parachutes, etc., during the war?

Capt. Seaton. No, sir.

Mr. LEA. When convenient, I wish you would supply that information and furnish to the reporter, and also furnish any other statistics pertinent to that subject that you may think proper. I would like that to include American production as well as American funds spent for purchases from other countries.

Capt. Seaton. Yes, sir.

(The statements referred to are to be furnished by Capt. Seaton and will be printed in full hereafter.)

Aircraft material produced and freighted in the United States from the beginning of the war (Apr. 6, 1917) to Nov. 11, 1918.

Balloons:

Kite, type R	642
Type M	2
Type J	1
Type C	1
Experimental observation	4
Spherical	10
Propaganda	215
Supply	125
Target	7

Balloons essentials:

Parachutes	28
Ferrosilicon	2,082 tons
Caustic soda	947 do
Hydrogen cylinders	89,225
Winches	48
Cable	1,222 1,000 feet
Hydrogen gas	17,634 1,000 cubic feet
Helium	117 do

Balloons equipment units

¹ Of the 642 type R balloons produced, only 507 had been shipped to their destinations, the other 135 remaining at the factory.

² Of the 89,225 hydrogen cylinders produced, only 89,125 had been shipped to their destinations, the other 100 remaining at the factory.

³ Of the 50 winches produced, only 48 had been shipped to their destinations, the other 2 remaining at the factory.

⁴ Of the 1,222 (1,000 feet) cable produced, only 1,172 (1,000 feet) had been shipped to their destinations, the other 50 (1,000 feet) remaining at the factory.

Balloon companies:

Soft helmets.....	1, 152
Sweaters.....	1, 402
Winter flying suits.....	1, 376
Moccasins.....	1, 626
Face masks.....	1, 152
Leather coats.....	1, 376
Knitted scarfs.....	1, 652
Leather vests.....	1, 402
Leather breeches.....	1, 402
Rubber shoes (soft).....	0

Raw materials:

Mahogany—	
Central American...}	
Mexican and African}	1,000 feet.. 9, 192
Walnut, American black.....	do 4, 505
Oak, quarter white.....	do 308
Cherry.....	do 618
Ash.....	do 121
Birch.....	do 663
Spruce.....	do 103, 092
Fir.....	do 71, 625
Cedar.....	do 4, 513
Linen.....	1,000 yards.. 3, 187
Balloon fabric.....	do 2, 647
Airplane fabric.....	do 6, 928
Cotton tape.....	do 6, 478
Acetate dope.....	1,000 gallons.. 484
Nitrate dope.....	0

Propellers:

Training.....	30, 054
Combat.....	3, 284
Handley-Page (laminations).....	1, 620

Instruments and accessories:

Air-pressure gauges.....	9, 994
Air speed indicators.....	9, 051
Altimeters.....	19, 657
Clocks.....	17, 593
Compasses, type B }	
Compasses, flat type }	10, 179
Fire extinguisher.....	12, 209
Gasoline gauges.....	550
Generator propellers, 300-watt.....	2, 800
Generator propellers, 600-watt.....	0
Generators, 300-watt.....	3, 448
Generators, 600-watt.....	0
Inclinometers.....	40
Map cases, rotating.....	2, 417
Navigation lights, sets.....	8, 771
Negative lens, 5 by 6 inches.....	13, 531
Negative lens, 9 by 9 inches.....	855
Oil-pressure gauges.....	12, 187
Oxygen apparatus.....	4, 318
Oxygen masks.....	3, 341
Oxygen tanks.....	12, 000
Panels, switch, type A.....	7, 733
Panels, switch, type B.....	7, 733
Panels, switch, type C.....	0
Radiator thermometers.....	11, 984
Safety belts, type S.....	3, 539
Safety belts, type L.....	6, 710
Safety belts, gunners.....	7, 506
Tachometers.....	20, 549

Special clothing—pilots and observers:

Goggles, Nos. 1, 2, and 3.....	20, 669
Soft helmets and caps.....	13, 976
Hoods, French type.....	13, 003
Chin guards.....	7, 476

Special clothing—pilots and observers—Continued.

Sweaters, No. 5.....	12,954
Winter flying suits.....	13,016
Summer flying suits.....	1,000
Moccasins, No. 8.....	16,500
Gauntlets, No. 9.....	4,588
Gauntlets, No. 10.....	4,612
Aviator coats.....	12,255
Antisinking coats.....	827
Face masks.....	3,003
Knitted scarfs.....	12,083
Hard helmets.....	6,000
Chauffeurs and motorcyclists:	
Goggles, No. 21.....	16,286
Soft helmets and caps.....	19,334
Trousers, No. 29.....	19,286
Gauntlets.....	50,000
Coats.....	19,286
Flying students:	
Goggles, Nos. 1 and 2.....	8,195
Hard helmets, Nos. 17 and 18.....	6,500
Sweaters, No. 5.....	5,700
Summer flying suits.....	7,140
Winter flying suits.....	600
Aviator coats.....	4,843
Construction squadrons:	
Boots, knee.....	5,025
Boots, hip.....	5,525
Coats, oilskin.....	6,750
Trousers.....	6,750
Hats.....	6,750
Machine guns:	
Lewis.....	31,671
Vickers (ground).....	11,904
Vickers (aircraft).....	411
Marlin.....	37,768
Browning.....	0
Ordnance and accessories—synchronizing devices:	
C. C. interrupter gears.....	5,290
C. C. generator.....	5,327
Interrupter gears, type HS.....	1,112
Interrupter gears, type L.....	26
Gun mounts:	
Flexible ring, type A.....	12,336
Gun sights:	
Ring.....	13,200
Wing vane.....	12,999
Unit.....	10,104
Auxiliary post and ring.....	4,545
Gun yokes:	
Single Lewis.....	448
Double Lewis.....	641
Single Lewis control.....	15
Duplex trigger control.....	242
Single gun stem.....	9,142
Unit sight mounts.....	3,807
Bombs:	
Incendiary—	
Mark I.....	0
Mark II.....	0
High-capacity demolition—	
Mark I.....	17,295
Mark II.....	114
Mark III.....	24,022
Mark IV.....	13
Mark V.....	0

Bombs—Continued.	
High-capacity fragmentation—	
Barlow heavy.....	353
Mark II-A.....	0
Mark II-B.....	0
Dummy bomb, Mark I.....	67,902
Bomb accessories:	
Bomb sights—	
Mark I.....	9,199
Bomb releases—	
Mark II.....	0
Mark V (cams only).....	5,061
Mark VII-B (traps only).....	100
Barlow heavy.....	249
Flares:	
Wing tip.....	83,000
Airplane Mark I.....	0
Flare brackets holders—	
Wing tip.....	12,121
Airplane Mark I flare release.....	0
Aviation pistol.....	0
Photographic equipment:	
Observation cameras.....	968
Enlarging lanterns.....	465
Camera guns.....	1,183
Unit section equipment.....	197
Cradles.....	1,060
Hangars:	
Steel, 66 by 100.....	735
Steel, 66 by 140.....	372
Steel, 110 by 100.....	317
Canvas.....	2,500
Miscellaneous orders:	
Mechanician suits.....	85,700
Palms and pouches.....	2,976
Large chevrons.....	10,000
Senior inspectors' chevrons.....	1,500
Fur backs and fur pockets.....	0
Linings for gauntlets.....	4,368
Inspectors' coats.....	0
Hard helmets.....	0

FINANCE.

1. The total expenditure of Air Service made by Air Service disbursing officers in the American Expeditionary Forces from the beginning of the war to November 15, 1918, have been as follows:

General equipment.....	\$2,881,689.66
Transportation equipment.....	4,614,538.46
Buildings and grounds.....	3,648,470.00
Maintenance and operation of schools.....	114,579.27
Pay and subsistence.....	687,715.73
Miscellaneous, including raw materials.....	1,286,218.17
Airplane and spare parts.....	4,194,705.01
Airplane instruments and accessories.....	283,199.58
Motors.....	2,783,530.76
Balloons.....	518,236.16
Balloon equipment.....	191,666.13
Clothing for aviators.....	36,423.44
Aerial ordnance and armament.....	62,367.26
Italian Government, iron purchased for its account in Spain.....	537,540.29
<hr/>	
Total expenditures to Sept. 30, 1918.....	21,840,879.92
October (not complete).....	5,339,277.63
<hr/>	
Total to Oct. 31 (not complete).....	27,180,157.55
Expenditure, Nov. 1 to 15, by Paris office.....	351,108.85
<hr/>	
Grand total.....	27,531,266.40

As stated above, the October figures are not complete. This is because our disbursing officers in Italy, one in England, and a few in France have not yet rendered their reports. The total not reported would not exceed \$100,000.

In using these figures it must be noted that they do not cover pay of officers and enlisted men, subsistence, construction done by the engineers, transportation, mileage, or any other supplies or services furnished the Air Service by other branches of the service.

Requirements for 15 days (approximated) Nov. 1 to 15, 1918:

France.....	frances..	60,000,000
Great Britain.....	pounds sterling..	750,000
Italy.....	lire..	1,000,000

Source: Report Maj. P. Jennings, chief disbursing division, A. E. F., Nov. 18, 1918. Appearing in the sixth progress report A. E. F., Part II.

Mr. LEA. Are you in a position at the present time to give me the amount of money expended on aviation out of the appropriations for that purpose during the war, prior to June 30, 1918? In other words, I want to show by the record what amount of the \$640,000,000 and other appropriations were expended in the time of the one-year program. A plan was devised for building about 22,000 planes within that period. I want to see to what extent the appropriations were consumed by the 30th of June, 1918.

Capt. Seaton. Yes, sir.

(The statements referred to are to be furnished by Capt. Seaton and will be printed in full hereafter.)

AUGUST 26, 1919.

[Memorandum for Lieut. Soule, information group office, director of Air Service.]

1. In accordance with your verbal request of this date, the following represents the amounts expended from the appropriation "Increase for Aviation, Signal Corps, 1918," as of June 30, 1918:

Allotment No.	Purpose.	Amount.
201	For airplanes and spare parts.....	\$56,007,000.00
202	For engines and spare parts.....	61,809,614.00
286	For experimental purposes.....	1,425,493.38

2. The above figures were furnished by Mr. Sprenkel, who is in charge of rewriting of the appropriations.

ALBERT LARIVIERE.

Mr. LEA. I wish that when convenient you would prepare a statement of deliveries to the Navy of engines and airplanes, both in this country and abroad, and as to whether or not the numbers of engines and planes so delivered is included within the figures which you have given to me this morning.

Capt. Seaton. I will do that.

(The statements referred to will be furnished by Capt. Seaton and will be printed in full hereafter.)

Airplanes and engines delivered to Navy to Nov. 11, 1918.

Airplanes:		
DH-4.....		155
JN4-H.....		86
JN6-H.....		34
S4-B.....		10
Total.....		<u>285</u>

Engines:

Liberty (Army type).....	50
Liberty (Navy type).....	3,432
Hispano-S.....	1
Total.....	3,483

Planes and engines delivered to Navy to Mar. 28, 1919.

Combat planes—DH-4.....	155
Training planes:	
JN4-H.....	86
JN6-H.....	40
S4-B.....	10
E-1.....	10
Total.....	301

Combat engines:

U. S. 12 (Liberty), Army type.....	102
U. S. 12 (Liberty), Navy type.....	4,18
Bugatti.....	3
Hispano.....	13
Total.....	4,235

Mr. LEA. Can you at this time state the number of foreign planes delivered to the A. E. F., which were in use at the time of the armistice, and in that connection I would like to have you give the total number of planes, both American and foreign, which were in use by the United States at the time of the armistice.

Capt. Seaton. We will get that for you.

(The statements referred to will be furnished by Capt. Seaton and will be printed in full hereafter.)

Airplanes in use in American Expeditionary Forces as of Nov. 11, 1918.

Types.	Only.	Rom-rantin.	Ad- vance air depot.	Fifth air depot.	First air depot.	Train- ing center.	With squad- rons on front.	Total.
RECEIVED FROM BRITISH.								
Avro.....						31		13
Curtiss.....						10		10
FE2-B.....	10				14			24
SE-6.....	16			1			4	21
Sopwith.....	23	17	1	2		294	12	349
Total.....								435
RECEIVED FROM FRENCH.								
A. R. No. 2.....	12				25	48		85
Breguet A-2.....	99					82	43	224
Caudron G-3.....	3					56		59
Farman F-40.....	7							7
Morane 30.....	3	1				83		37
Nieuport.....	20	1				899		920
Roulers.....						104		104
Salmson 2A.....	103	15		6	39	12	157	332
Spad.....	113	14	2	80	16	24	328	527
Voisin.....	2					8		10
Total.....								2,305
RECEIVED FROM UNITED STATES.								
DH-4.....	25	178	24	41	64	270	196	798
French.....								2,305
British.....								435
United States.....								798
								3,538

Sources.—Supply section reports; progress report No. 6.

Division of Military Aeronautics, executive section; aero information branch, statistics subbranch, plane report for United States, as of Nov. 11, 1918.

Fields.	R-4.			JN4-A. JN4-D.			JN4-H. JN6-H.			Thomas-Morse.				DeH.			Miscellaneous.				Total.				
										S4-B.		S4-C.													
	In commission.	In reserve.	Repairable at field.	In commission.	Repairable at field.	Repairable at depot.	In transit.	In commission.	Repairable at field.	Repairable at depot.	Beyond repair.	In transit.	In commission.	Repairable at field.	Repairable at depot.	Beyond repair.	In commission.	Repairable at field.	Repairable at depot.	Beyond repair.	In commission.	Repairable at field.	Repairable at depot.	Beyond repair.	In transit.
Primary training:																									
Barron.....				53	21	35	5	4	20	2							57	61	38						
Carruthers.....				82	41	1		5	12	1							87	54	2						
Chanute.....				53	32	16	2										53	33	16						
Eberts.....				93	16	15	1										93	16	15						
Kelly.....	1			117	36	64	24										118	38	65	26					
March.....				99	30	15											99	30	15						
Mather.....				106	22	6	1										106	22	6	1					
Park.....				55	25	54											55	25	54						
Rich.....				64	35	8	2										64	35	8						
Scott.....				65	10	46											65	11	46						
Souther.....				74	20	22	6										74	20	22						
Taylor.....				65	26	32	5										65	26	32						
Advance flying:																									
Call (observation).....				37	54	13											39	54	15						
Love (bombing).....				49	31	10											49	31	10						
Payne (pursuit).....				64	10	24	1	11									64	10	24						
Bombing:																									
Killington.....				41		49		174	53	43							216	58	92						
Observation:				18	37	19		5	13	9							23	50	26						
Langley.....				6				54	19	6							60	27	16						
Pursuit:								61	25	26							78	21	18						
Carlstrom.....				25		4		43		1	2						68	27	26						
Rock well.....				24		41		63		2							135	60	108						
Quincy.....				9		2		82		3							70	39	11						
Tulliver.....				18		22		14		3							47	11	22						
Tulliver.....				18		22		14		3							47	11	22						

Miscellaneous:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Aberdeen.....	3	3	1	6	10	3	1										9	10	3	1	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Alfred Vail.....	3			15													18	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Baker.....	2																2	14	17	10	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Bolling.....		6	11	2	3	4	3										89	16	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Brooks.....		89	16	4					2	2							14	17	10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Emerson.....																	14	5	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
First P. T. Wing.....		47	2	20	10	4	61	48	21	49	1	1					116	65	49	65	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Second P. T. Wing.....	18	8	4	1			16	7	1	1							36	15	5	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Wilbur Wright.....		13	6				4	2	5								40	15	23																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Supply depots:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Americus.....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Fairfield.....		1				12														3	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Los Angeles.....		20																	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Middletown.....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
San Antonio.....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Total.....	27	8	9	21	385	521	515	36	42	105	692	395	173	53	3	139	19	21	6	11	135	86	61	6	1	32	26	11	20	11	47	54	4	3,301	1,004	529	101	49	275																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Repair depots.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Dallas.....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</

Standard J-1 planes not included.

Mr. LEA. Maj. Foulois, to what extent did the United States contribute to the production of engines and planes which were furnished by the Allies to the A. E. F.?

Maj. FOULOUS. The extent to which the United States contributed, in my opinion, was very great, especially in connection with our first contracts for French airplanes and engines. It is fully understood that pending the development of the aircraft industry in the United States that our troops at the front would have been to a great extent dependent upon securing airplanes and engines from the Allies abroad. Based upon this fact, a large contract was placed with the French in August, 1917. This contract called for several thousand planes and engines of types suitable for training and service purposes in France. This contract, however, was contingent upon the delivery by the United States in France of certain quantities of raw materials and machine tools. These raw materials and machine tools were delivered over a period, as I recollect, covering the months of December, 1917, and as late as July and August, and possibly later, of 1918.

Prior to this time, numerous contracts for aircraft material of all descriptions had been placed in the United States for raw material and finished materials of every description. This has no special bearing on the delivery of finished materials to the American forces in France; except as regards the equipment that we received under this original contract of August, 1917.

The point of the question, as I see it and as asked me, is what the United States had done in furnishing the Allies with materials. In my own opinion, if it had not been for the resources and materials from the United States, there would have been no air service on the western front, in so far as the English, French, and Italians were concerned during the last two years of the war.

Mr. LEA. Can you state at this time the death rate of American aviators in the service, both in training and at the front, and give comparative figures of the experiences in that regard of our allies?

Gen. MENOHER. That information is available, but I can not give it to you just at this moment.

Mr. LEA. I would be pleased to have you furnish the information to the reporter or the committee, and have the reporter insert when supplied.

(The statement referred to will be furnished by Gen. Menoher and will be printed in full hereafter.)

AVIATION FATALITY STATISTICS.

PILOTS.

The following figures are taken either direct from data on file or are derived from such information. In the latter case, there is the possibility of injustice in that a conclusion is arrived at without necessarily knowing modifying circumstances.

There should be considered, when reviewing these statistics, that conditions during the years included have been abnormal; that training has been carried on under most exacting conditions, with constantly growing need of acceleration of output, with resources strained to the utmost, and under great difficulties incident to the provision of suitable accommodations and with a shortage of suitable training equipment.

While these figures afford some indication of the position in the future, they can not be taken as a criterion of the course of events in time of peace.

Short flights constitute the greater portion of one's training. There is thus a disproportionate number of take-offs and landings to hours flown when compared with cross-country flying of any kind.

In connection with battle casualties, one will note that the United States Air Service entered aerial warfare at the culmination of activity. The 37 squadrons in operation in the First and Second Armies, whose flying hours are given in these tables, flew 966 hours per squadron, although these units had been at the front varying periods, from one day to seven months. The United States hours flown nearly equal the hours flown by the Belgians during the entire war. The British squadrons flew 1,292 hours per squadron on all fronts, active and inactive.

Mortality statistics all air services.

PRELIMINARY TRAINING.

STUDENT PILOTS.¹

Nationality.	Period.	Hours flown.	Mortality.	Ratio mortality to hours flown.
British.....	(²)	169,406	85	1:1993
Belgian ³				
French.....	(⁴)	⁵ 420,850	157	1:2680
Italian.....	1918	91,135	96	1:949
Swiss.....	1918	⁶ 3,851	5	1:770
	1917	⁶ 3,424	3	1:1141
	1916	⁶ 1,301	1	1:1301
	1915	⁶ 588	3	1:196
	1914	⁶ 343		0:343
United States in Italy.....	1918	5,853	1	1:5853
United States in France.....	1918	31,762	11	1:2887
United States in England.....	1918	12,913	8	1:1614
United States in America.....	1919	11,781	9	1:1309
	1918	362,706	122	1:2973
	⁷ 1917	31,352	15	1:2090
	⁸ 1917	⁹ 4,716		0:4716
	1916	⁹ 5,337		0:5337
	1915	⁹ 1,814	1	1:1814
	1914	⁹ 824	1	1:824
	1913	⁹ 739	5	1:148
	1912	⁹ 225	1	1:225
	1911	⁹ 129	1	1:129
American Expeditionary Forces.....	1917-1919	52,515	22	1:2387

ADVANCED TRAINING.¹⁰

STUDENT PILOTS.¹¹

British.....	(¹²)	241,939	422	1: 573
Belgian ¹³				
French ¹⁴				
Italian.....	1918	36,610	49	1: 747
Swiss ¹⁵				
United States in Italy.....	1918	2,644	1	1:2,644
United States in France.....	1918-19	109,025	99	1:1,101
United States in England.....	1918	10,753	28	1: 384
American Expeditionary Forces.....	1917-19	121,661	130	1: 936
United States in America.....	¹⁶ 1919	1,989	2	1: 945
	1918	124,282	44	1:2,802

¹ Includes only student pilots; not instructors killed in teaching or any other modifying factor.

² July-December, 1918.

³ No data on training.

⁴ Entire war, 1914-1918.

⁵ Obtained by multiplying number of brevets (16,834) by 25, number of hours necessary for first brevet.

⁶ Assumed to be equivalent to preliminary.

⁷ Sept. 1 to Dec. 31.

⁸ To Apr. 28.

⁹ Accidents of early days, peace time, not proper comparison with present-day military training.

¹⁰ Includes both advanced and specialized.

¹¹ Includes only student pilots; not instructors killed in teaching or any other modifying factor.

¹² July-December, 1918.

¹³ No data on training.

¹⁴ No data on advanced training.

¹⁵ To Aug. 21.

Mortality statistics all air services—Continued.

ALL TRAINING—PRELIMINARY, ADVANCED, AND SPECIALIZED.

PILOTS.¹

Nationality.	Period.	Hours flown.	Mortality.	Ratio mortality to hours flown
British.....	(*)	411,345	507	1.24
Belgian ²	1914-1918	420,850	157	1.24
French.....	1918	127,745	145	1.14
Italian.....	1918	3,851	5	1.30
Swiss.....	1917	3,424	3	1.10
	1916	1,301	1	1.13
	1915	588	3	1.18
	1914	843	0	1.00
United States in Italy.....	1918	8,497	2	1.40
United States in France.....	1918-19	140,787	110	1.13
United States in England.....	1918-19	23,666	36	1.13
United States in America.....	1919	13,770	11	1.13
	1918	486,988	166	1.13
	1917	31,352	15	1.13
	1917	4,716	0	0.00
	1916	5,337	0	0.00
	1915	1,814	1	1.13
	1914	824	1	1.13
	1913	739	5	1.13
	1912	225	1	1.13
	1911	129	1	1.13
American Expeditionary Force.....	1917-19	174,176	132	1.13

¹ Includes student pilots only; not instructors killed in teaching or any other modifying factor² July-December, 1918.³ No data on training.⁴ Entire war 1914-1918.⁵ Preliminary flying only. No data on advanced and specialized.⁶ To March, 1919.⁷ Sept. 1 to Dec. 31.⁸ To Apr. 28.⁹ Accidents of these early days, peace time, not proper comparison with present-day military training¹⁰ If comparison of American Expeditionary Forces ratios made with United States ratio, it should be considered that in the American Expeditionary Forces the advanced and specialized training was done in service airplanes of high speed and greater danger than the airplanes used in the United States*Battle fatalities.*

PILOTS ONLY.

Nationality.	Period.	Hours flown.	Fatalities.	Ratio fatalities to hours flown.	Average percentage of fatalities to total flights
British.....	July-October, 1918.....	235,842	248	1:1,031	1.13
Belgian.....	1914-1918.....	40,000	43	1:930	1.13
American Expeditionary Forces.	March-November, 1918....	35,747	106	1:337	1.13

¹ No data.

Mr. LEA. Is there anything you want to add to what has been said here, General?

Gen. MENOHER. I believe I have not anything myself to bring up.

Mr. LEA. General, I will ask you this: Looking back at the history of the Air Service during the war and considering what was done and attempted to be done and what was accomplished, what is your judgment as to the extent of its success and to what extent did we materially contribute by the Air Service to the success of the American cause and to the allied cause?

Gen. MENOHER. In answer to that question, I would say, first, that we must keep in mind that this war in which we were engaged, was the most desperate war that had ever been fought, one that in fact involved more activities than any other war that was ever fought, and we must view the whole thing from that standpoint and from no other. Ordinary peace-time standards will not answer. I think we are too prone to judge the accomplishments by our peace-time standards and not by the war standards.

Judged by peace-time standards, perhaps, we may say that the Air Service fell down. But taking the whole thing by and large, taking the difficulties that were to be met, taking, for instance, the fact that we were separated from the seat of the war, considering our previous unpreparedness, I am of the opinion that while we did not have an adequate force of aircraft on the line at one time, that the accomplishments just the same of the United States in the matter of the training of pilots and preparing the personnel for service, in the production of raw materials, and in engines and in planes was little short of marvelous. If the armistice had been deferred six months, I think the story would have been entirely different.

As I said yesterday, we felt, on the line—and I was on the line during the whole time that the Americans were engaged—that the American people were behind us, and that they were coming across and that we would have to continue to be patient.

I would like also to repeat what I said yesterday about the matter of the time element; that is, it is almost always forgotten in this matter of production. I cited the case of the Browning gun, which was a small affair as compared with an aircraft gun. But it took 13 months, I understand, to produce the first of these guns from the time the order for the production was given. So that we can not form any estimate of the accomplishments of the air production part of the Aviation Service in this country forgetting the time element, which is really, after all, the most important element in the whole thing.

Mr. LEA. In other words, the difficulties to be overcome—and which were responsible for the delay, the largely physical difficulties rather than human faults.

Gen. MENOHER. We are all human, and we all commit errors. But I have to yet find the first person in this war who has not done what he considered his very best, and the difficulties were almost entirely physical, to my mind.

Mr. LEA. Gen. Foulois, you spoke of machines having been ordered for use on the Mexican border in 1916. What information can you give as to whether or not contractors furnished these machines promptly, and, as to their usefulness after they were secured?

Maj. FOULOUS. As I stated before, our original equipment consisted of eight machines, six of which were actually smashed in service, and two were condemned as unfit for service within a total date of approximately six weeks. Anticipating the need for additional equipment under the conditions with which we were confronted, steps were taken through numerous cablegrams and telegrams sent by Gen. Pershing to Washington to expedite any type of machine that would approximately meet the severe flying conditions to which we were confronted in Mexico. Based upon these requests we received at Columbus, N. Mex., I think, either in April or May, four

machines furnished by the Curtiss Co., of Buffalo, which it was supposed might meet the strenuous flying conditions in New Mexico. These machines were modifications of the then existing type, which we were using, the JN type, with additional wing surface, to allow us to get over the high mountains.

We tested these four machines, each officer in the squadron flying them; and it was the opinion of practically every officer who flew them that they would not meet the conditions. I therefore called the board of officers to officially pass upon these machines, and each member of the squadron signed the report condemning them for service in Mexico as unsuited and probably unsafe.

Immediately after this report was received in Washington, efforts were made to push the production of what was then known as the R-2 type, a larger and more powerful machine, with higher powered engine. The first of this type—as I recollect, it was the R-2, afterwards developed into R-4—reached Columbus, N. Mex., to the best of my recollection, in May.

From May on until September of 1916 we continued to receive a number of planes of this type. This type was given some very exhaustive tests at Columbus, and after experiencing a great deal of difficulty with the machine, particularly in connection with the propellers, which flew off and broke to pieces, due chiefly, as we thought, to the high, dry, and hot atmosphere, we finally succeeded in getting a great amount of service out of this machine during the remaining period of General Pershing's expedition in Mexico.

Those, to my knowledge, were the only types of airplanes secured by the American forces during their service under General Pershing in the American punitive expedition in 1915 and 1917.

Mr. LEA. Were those armed machines?

Maj. FOULOIS. No, sir. The only arms that we had with any of the machines in Mexico were the Springfield rifles and pistols, which each machine was equipped with.

Mr. LEA. Up to the time that America entered the European war, had the American factories produced any modern fighting airplanes?

Maj. FOULOIS. Not to my knowledge. There were numerous advertisements in the aeronautical magazines as to different models and different types which different manufacturers throughout the country had either produced or were in process of production. That was one of the principal things upon which I based many of my cablegrams and telegrams which Gen. Pershing approved and sent in connection with our requests for additional equipment.

At that time I was pretty certain that a great deal of this advertising of what the industry was accomplishing in the United States was mostly fiction, and that if those concerns had these machines we ought to have had them.

Mr. LEA. Some of these factories were producing for the Allies, were they not, before we entered the war?

Maj. FOULOIS. The only factory that I have personal knowledge of producing them for the Allies were the Curtiss Co. I think they were producing some of their J. N. types for training purposes to the British, in connection with their air training forces in Canada. It is possible also that the Curtiss Co. were sending some of their engines to England for training purposes there. I think also the Curtiss Co. has contracts with the British for water flyers, flying boats. I have

no knowledge of any other concern in the United States which was manufacturing finished airplanes and engines for the allied forces.

Mr. LEA. I presume then it is substantially true that up to the time the United States entered the war American production, so far as military machines was concerned, was devoted to training planes.

Maj. FOULOIS. Absolutely, in my opinion. It is also my opinion that at the time we entered the war there was no machine in existence in the United States which could be classed other than an elementary training machine.

Mr. LEA. And it necessarily follows that we did not have any experience with these other types of machines?

Maj. FOULOIS. It would necessarily follow that we had to build an industry from the ground up to meet our war needs, both in personnel and in material.

Mr. LEA. The other day you spoke of anticipating the defects of the DH-4 when it would arrive in France?

Maj. FOULOIS. My statement which regards the probable defects which might be encountered in the DH-4, or any other plane which would be produced in the United States was based upon this: It has been my experience in receiving, during the past 11 years, new equipment of any type from the manufacturers, that that equipment, whether engines or airplanes, would have to be subjected to rigid tests for front line service. That was specially emphasized in our work in Mexico, where we received these four planes perfectly suitable probably for service in certain sections of the United States, and absolutely unsuitable and unsafe for flying purposes in Mexico. Based upon those past experiences, and based upon the fact that the facilities in France would absolutely prohibit us from receiving or using anything brought there that would require setting up machine shop facilities or manufacturing facilities to remodel or rebuild anything that came over, one of the last things that I tried to impress upon our production people over here, in numerous cases, particularly our engineer men, was that when we receive an airplane or engine in France it should be in such shape that we could take it out of its box, assemble the plane and the engine, fill it with gas and oil, put our test pilot in it, and have him fly it, and then have nothing to do with it except to adjust it for the particular pilot or personnel who were going to use it.

That, as I say, was based upon the necessity as it existed in France—lack of materials, lack of everything in the world there to carry on our operations. And I had every anticipation that the new type of plane or new type of engine, with the rush and hurry that would exist over here, would probably come to us in a condition that a great many things had to be changed about it, and I tried to impress that upon our people before I left, and when the first machine came over I sent the best engineer officer I had, Col. Dodd, and one or two other men, to meet that plane at Roma Rantin, our big assembling plant in France, go through that plane and engine as thoroughly as possible, and find out and report upon every possible feature. The long cablegram which enumerated 50 or 60 defects and alterations that had to be made was prepared and sent by Gen. Pershing.

The fundamental idea behind that was to thoroughly impress upon our people over here the conversations I had had in the past that we would be unable to make those alterations and changes over there,

and that the machines should come to us as nearly perfect for service conditions as possible.

In connection with the Liberty engine, it was closely allied with the airplane, the same thing occurred. The first two Liberty engines that were sent over came to us hurriedly. Every one was pressing for the Liberty engine. The English, French, and Italians were very anxious to get it; they all wanted to see it tested, because if it did come through and was a good engine it solved the engine problem for aviation.

Mr. LEA. At that time, was the engine problem still unsolved?

Maj. FOULLOIS. The engine problem, in my opinion, for a great portion of Aviation Service, was never solved until the Liberty engine was built and tested out. It has been the history of aviation since its birth that airplane production always exceeds engine production. They have never been able to produce enough engines to keep up with the airplane production itself. It is simply due to the fact that practically every aeronautical engine since the time that the Liberty was produced was a hand-made engine, and in the original proposition in the discussion as to the production of the Liberty engine, we followed this fundamental policy, and that was that what we needed was not necessarily the finest engine in the world from a technical standpoint, but that we needed production of a first-class engine; that is, a machine engine to be turned out in large quantities. That was the original conception and original reason why the Liberty engine designers, in my opinion, took a gamble on that.

That was the reason why, as I say, England, France, and Italy were so concerned over the production of that engine. They never had enough engines for airplane production over there; they were all keenly anxious to get it, all wanted to test it, and we took charge of the tests ourselves as they came over.

The first engine gave us trouble; as I recollect, the connecting rods were weak and were thrown from the crank case and wrecked the engine, and I immediately started an investigation on it, and brought the officers who had accompanied these two engines over before me, and went right into the history of that engine, clear back to the time it left the factory; and they informed me that due to the hurry up and rush they had been up 48 hours prior to the final assembly of that engine without a wink of sleep, and had practically assembled the engine with their eyes shut. I made them immediately tear the engine down, and we went over a few little errors of assembly and a number of things in faulty inspection and went at the tests with them.

That also made me sit down and draw up a cablegram, in which I made it as emphatic as possible to impress upon the authorities over here that the Liberty engines or any engines should not come over in that shape. I based that purely on the idea that we did not have the facilities in Europe to do the work that should be done over here.

Mr. LEA. The record shows that during the month of October 1918, the United States produced 3,870 Liberty engines. I would like to know whether or not any other country in the world has ever approached that as a quantity production in a similar period of time.

Maj. FOULOIS. Without having any facts before me, it is my opinion that that probably equaled or was better than any production ever produced in the same period. I submit this simply as an opinion, because I have no figures on it. I would be perfectly willing to say this, that in my opinion, it would only have taken a month or two, or a few months at the most, for the United States to have been able to produce as many Liberty engines in one month as the combined efforts of France, England, and Italy.

Mr. LEA. During that same month the total engine production of the United States was 5,297, which I presume compared at least favorably with the production of any other nation at that time?

Maj. FOULOIS. That is why I am so anxious and so eager for an opportunity to go into the preliminary policy in connection with the Liberty engine. That engine was thoroughly discussed and the plans were thoroughly gone over by a committee of Army and naval officers, of which I was chairman. We studied it very carefully, knowing what the difficulties had been in the past, to keep the engine production balanced with airplane production, and we felt positive that if we could get the production of an engine that was machine-made and turn out large quantities of them that we could not only take care of our own needs but help the air services of the Allies.

Mr. LEA. That is, it was your judgment at the beginning of the war that this Liberty engine program should be adopted?

Maj. FOULOIS. We adopted it from the very start and never lost faith in it in any shape—that is, in so far as I was concerned with it myself, and I had a great many arguments and discussions over there to convince not only our own allies but a great many of our own people in the United States that the Liberty engine was not a failure; that the difficulties that the Liberty engine was subject to were minor difficulties due to faulty inspection, due also to changes that any new product must go through before it is a finished product.

Mr. LEA. And the situation presented at the beginning of the war made it necessary that whatever engine was produced must be subjected to those uncertainties and difficulties?

Maj. FOULOIS. It was fully expected that when we decided on the policy of the Liberty engine that it would be subject to criticism, subject to hard knocks and hard service before it would ultimately become a finished product for use at the front. It has been the conclusion abroad, and I think finally it is understood here, that no new airplane engine is finally accepted or considered serviceable until it has had at least six months' service at the front. The only way to get that is to build it, put it into service, find out what is wrong with it, eliminate the troubles, and use it. The particular trouble, as I gather from the discussions about the Liberty engine, was that they did not wait long enough to see what the ultimatum, as finally delivered on the front, was as regards its efficiency and ability.

Mr. LEA. But as was finally demonstrated by its use, is it your opinion that it was or was not a success?

Maj. FOULOIS. In my opinion the Liberty engine was a success for all purposes of which it was ultimately used on the front.

Mr. LEA. Gen. Menoher, if the figures are conveniently accessible to you, I wish you would supply to the reporter for the record a statement showing the production of engines and airplanes by Eng-

land and France for certain periods, week or month, or whatever your records show.

Gen. MENOHER. I will be glad to do that.

(The statement referred to will be furnished by Gen. Menoher and printed in full hereafter.)

Total production of airplanes in Italy, France, England, and United States, by months, from Jan. 1 to Sept. 30, 1918.

	Italy. ¹	France. ¹	England. ¹	United States. ¹
1918.				
January	305	1,484	2,347	729
February	349	1,615	2,288	734
March	189	1,009	2,587	924
April	161	2,150	2,107	743
May	291	2,023	3,051	731
June	435	2,262	2,650	794
July	459	2,595	3,474	1,150
August	365	2,857	2,279	713
September	374	2,238	2,726	1,207
Total	2,928	18,833	23,509	7,749

¹ Report of Maj. Gen. M. M. Patrick, Mar. 15, 1919, to the Acting Chief of Staff, G-1, general headquarters, American Expeditionary Forces.

² Statement of monthly shipments of all types of training and service planes from points of production, administrative division, program and statistics department.

Data regarding production of engines in France is not available. The following figures for English production are taken from the twenty-ninth progress report, Air Service, American Expeditionary Forces:

Output of machines and engines.

	August, 1914, to May, 1915 (10 months).		June, 1915, to February, 1917 (21 months).		March, 1917, to December, 1917 (10 months).		January, 1918, to October, 1918 (10 months).	
	Machines.	Engines.	Machines.	Engines.	Machines.	Engines.	Machines.	Engines.
R. F. C.	530	141	7,137	8,917	12,275			
R. N. A. S.	(¹)	(¹)	(¹)	(¹)	1,246			
R. A. F.							26,085	29,862
Total	530	141	7,137	8,917	13,521	13,979	26,085	29,862

¹ No record.

For comparison, the following figures for American production are submitted from airplane and engine production charts of the Bureau of Aircraft Production:

Output of machines and engines.

	April, 1917, to January, 1918 (10 months).		February, 1918, to October, 1918 (9 months).	
	Machines.	Engines.	Machines.	Engines.
Experimental and other	1,264	457	97	285
Program	2,205	3,009	8,671	25,922
Total	2,469	3,066	8,768	26,207

¹ 9 transferred to Navy.

² 36 Liberty 12s transferred to Navy.

³ 3,370 Liberty 12s transferred to Navy.

In the month of October, 1918, America produced 32 experimental, 3,878 Liberty 12, 753 Hispano-Suiza, 309 Le Rhone, and 357 of other "program" types (OX-5, Laurence, Gnome, and Bugatti), a total of 5,329 engines. Without allowance for increase in production, this means that America had reached a stride of more than 60,000 engines per year, a production after 19 months of war far in excess of any other country after 51 months of war.

(Gen. Menoher stated he had made an examination of records regarding the Curtiss plane sales and asked if his explanation could be inserted in the record. Request granted, and letter follows:)

WAR DEPARTMENT, AIR SERVICE,
OFFICE OF THE DIRECTOR,
Washington, August 8, 1919.

MY DEAR MR. FREAR: Upon return from the hearings before your committee on Thursday afternoon I instituted a thorough investigation to determine whether or not any offers had been received from the Secretary of War relative to the future sale of standard J-1 airplanes to accredited fliers.

I take pleasure in informing you that such instructions were received by my office during my absence from the city on the occasion of the arrival of the R-34 (dirigible airship) from England early in July and that prompt action was taken to comply with the instructions received. The instructions were not received from the office of the Secretary of War, but came from the director of sales, who quoted the authority of the Secretary of War. Due to my absence, the matter was neither brought to my attention at that time or subsequently thereto.

In view of the above-mentioned facts, it is requested that either I be permitted to appear before your board to retestify regarding the facts as now known or that this letter, hereby certified to as a correct statement of facts, be incorporated in your record as an amplification of my previous testimony on this subject.

Very truly, yours,

CHAS. T. MENOHER,
Major General United States Army, Director Air Service.

HON. JAMES A. FREAR,
Member of Congress, Washington, D. C.

MR. LEA. Can you give me any information as to the method followed of shipping engines and airplanes overseas?

Capt. SEATON. The methods of packing planes and engines followed by the British and French were examined, and it was found that by a different arrangement a great saving in space could be gained. A table is submitted showing the saving in space due to improved methods of packing. This, of course, saved a great deal when shipped from the factory to the port of embarkation, and a great saving in space in the shipment overseas, and also in shipping from the port of debarkation to the point of assembly.

(The statement submitted by Capt. Seaton is here printed in full, as follows:)

There are listed some figures showing the representative saving on boxes by the packing and boxing section.

	Cubic feet.
De H. 4 airplanes:	
British box, space for 1 airplane.....	1,531
Packing and boxing section box.....	886
Saving.....	645
Liberty 12 engines:	
Original box.....	92
Packing and boxing section box.....	71
Saving.....	21

	Cable feet.
SE-5 airplanes:	
British boxes, 1 airplane.....	1,086
Packing and boxing section box.....	578
Saving.....	517
Hispano-Suiza engines:	
French box, 1 engine.....	56
Packing and boxing section box.....	53
Saving.....	3
Le Rhone engines:	
French box, 1 engine.....	45
Packing and boxing section box.....	39
Saving.....	6
L. U. S. A. C., 11 airplanes:	
French box space for 1 airplane.....	1,140
Packing and boxing section box.....	870
Saving.....	270

Mr. LEA. The committee will now stand adjourned subject to call of the chairman.

SUBCOMMITTEE NO. 1 (AVIATION) OF THE
SELECT COMMITTEE ON EXPENDITURES
IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Chicago, Ill., August 11, 1919.

The committee met at 10 o'clock a. m., Hon. James A. Frear presiding.

Present: Messrs. James A. Frear, Walter W. Magee, and Clarence F. Lea.

TESTIMONY OF MR. WILLIAM A. HYDE.

(The witness was duly sworn by Mr. Frear.)

Mr. FREAR. Where is your home, Mr. Hyde?

Mr. HYDE. Milwaukee, Wis.

Mr. FREAR. That has been your residence how long?

Mr. HYDE. I have been there 28 years.

Mr. FREAR. And were you in the Army?

Mr. HYDE. I was in the Army; yes.

Mr. FREAR. What is your business now?

Mr. HYDE. I am a lawyer.

Mr. FREAR. In the city of Milwaukee?

Mr. HYDE. Yes.

Mr. FREAR. Will you briefly explain to the committee what you have in mind regarding your experience and your position when in the Army; when you originally entered the service and what you were particularly interested in?

Mr. HYDE. I enlisted January 22, 1918, and was assigned to the Four hundred and thirty-fourth Air Production Squadron.

Mr. FREAR. By whom?

Mr. HYDE. From headquarters at Vancouver, Wash., and from there we were sent down to Clatsop, Oreg., February 4, 1918.

Mr. FREAR. What was your position?

Mr. HYDE. When I first went there I was assigned to become a price clerk in the office there.

Mr. FREAR. Where was that?

Mr. HYDE. At Clatsop, Oreg.

Mr. FREAR. Whereabouts is Clatsop?

Mr. HYDE. It is 118 miles west of Vancouver; Vancouver is just across the river from Portland, Oreg. Clatsop is on the coast, and I was assigned to the office there and became a pricing clerk. My duties were to price the—I can not think of the term—requisitions as Porter Bros., the contractors; would send these requisitions in to the firms to order goods from, and then they would send a copy of the requisitions to our office, so that we would have the prices on the records, and the invoice would come in later, and we priced the goods from the invoices.

Mr. FREAR. What do you mean by that, "priced the goods from the invoices"?

Mr. HYDE. They were charged to the different camps. At first there were only two camps there, Camp A and Camp B.

Mr. FREAR. You say you priced the goods; what do you mean by that?

Mr. HYDE. All the goods that were shipped into Clatsop were charged directly to Camp 1-A.

Mr. FREAR. Shipped from where, from Vancouver?

Mr. HYDE. From different parts of the country; mostly from Vancouver and Portland.

Mr. FREAR. What kind of requisitions were they?

Mr. HYDE. The rolling stock for railroads, and steel, and provisions for the men, shoes, horses; all kinds of supplies.

Mr. FREAR. You priced them. What do you mean by that?

Mr. HYDE. From Camp 1-A these provisions were distributed to the other camps and then they were charged.

Mr. FREAR. What do you mean by the term "priced"?

Mr. HYDE. The price that we charged up other camps that were distributed to.

Mr. FREAR. You charged a price on the part of the Government to these camps that were working on plus contracts?

Mr. HYDE. Yes. We were supposed to charge these other prices. but the prices varied. The prices were originally charged to Camp 1-A. Then the provisions were sent to subsidiary camps further out, and then we had to charge those same prices for the goods delivered; and in making these prices some of the requisitions for the same commodities and goods varied in price.

Mr. FREAR. You mean they varied in price, how?

Mr. HYDE. There was a difference there.

Mr. FREAR. How did that come about?

Mr. HYDE. They claimed that at that time the amount——

Mr. FREAR. Who is "they"?

Mr. HYDE. The man at the head, Mr. Robert Smith, who was the man in charge of the main office. I do not know his initials, but he had three initials.

Mr. FREAR. He varied these prices?

Mr. HYDE. These various prices were charged when they came in on different requisitions.

Mr. FREAR. What was the practice with you?

Mr. HYDE. I was told to use the largest prices.

Mr. FREAR. What reason was given for that?

Mr. HYDE. The reason was to be safe. He was told they were charged fixed prices by different corporations and firms.

Mr. FREAR. What was the effect of using this largest price?

Mr. HYDE. It was done so that Porter Bros. would be insured against loss.

Mr. FREAR. Was that the reason?

Mr. HYDE. That was the reason Mr. Smith gave me.

Mr. FREAR. This was a cost plus contract?

Mr. HYDE. Yes.

Mr. FREAR. Did the price have in mind any bearing upon the terms of the contract and the profits they were to receive; the larger the price the greater the profits?

Mr. HYDE. Yes.

Mr. FREAR. Was that the only reason given to you by Mr. Smith?

Mr. HYDE. That was the only reason he gave me.

Mr. FREAR. How much would those prices vary, in a general way?

Mr. HYDE. Anywhere from 20 to 40 or 50 per cent.

Mr. FREAR. For what kind of purchases were they?

Mr. HYDE. On food commodities, and also on the tents.

Mr. FREAR. Were you instructed to fix the maximum price, irrespective of what the conditions were?

Mr. HYDE. Yes.

Mr. FREAR. Did you do so?

Mr. HYDE. I did so.

Mr. FREAR. Under his instructions?

Mr. HYDE. Yes. I would not know, however, what my particular price was.

Mr. FREAR. What occurred in addition to that?

Mr. HYDE. I also remember that many of the commodities that were sent out to these different camps were dropped down on the way out by the "skimmers."

Mr. FREAR. What do you mean by that?

Mr. HYDE. The skimmers were overloaded; it was very muddy there sometimes, and the mudholes were large and deep and the horses would sink in and they would have to pull them out, and the skimmers would throw out some of the goods.

Mr. FREAR. What became of the goods thrown out?

Mr. HYDE. They would stay along the road; sometimes they would throw them in the bushes. They would tell me they did that because they wanted to come back.

Mr. FREAR. Did you see that yourself?

Mr. HYDE. No, sir; I heard that; but I know there were reports right along that some of these provisions were missing from the different camps.

Mr. FREAR. Did you have anything to do with the checking?

Mr. HYDE. Yes; I would check them up, and our records would show they had been placed on the trucks and sent out.

Mr. FREAR. Who made complaints?

Mr. HYDE. Complaints came from the camp clerks.

Mr. FREAR. That the goods were not received?

Mr. HYDE. That they were not received.

Mr. FREAR. Then what occurred?

Mr. HYDE. Then we would look it up, and our records would show they had been given to the skimmers, and Mr. Smith told the clerks so, and that would be the end of it.

Mr. FREAR. What became of the cost-plus contract with regard to those provisions?

Mr. HYDE. They would be charged to the Government.

Mr. FREAR. They would be charged in favor of Porter Bros. or any one who had a cost-plus contract, notwithstanding they were not received?

Mr. HYDE. Yes.

Mr. FREAR. You said you heard from the skimmers that they would throw stuff off. What became of any of these goods? Were they recovered?

Mr. HYDE. No.

Mr. FREAR. Do you know about the quantity, as far as you could hear?

Mr. HYDE. Sometimes a hundred to two hundred pounds would be thrown off.

Mr. FREAR. Of what?

Mr. HYDE. Usually they would throw off flour supplies; they would open a bag and let the flour run out, so that they would not be discovered.

Mr. FREAR. How did you gather that was the reason—what they told you?

Mr. HYDE. That is what the skimmers told me at night.

Mr. FREAR. And they were the men who drove the teams, were they?

Mr. HYDE. Yes; because they were afraid that if they came back with this stuff undelivered to the camps they could not get home without being punished, and they did it to get back.

Mr. FREAR. What kind of conditions were there?

Mr. HYDE. The roads were very poor at that time. They had just thrown brush on them. There was an old road that they used.

Mr. FREAR. What did they use—trucks?

Mr. HYDE. They used sleds.

Mr. FREAR. For snow?

Mr. HYDE. No; the sleds just went over the mud.

Mr. FREAR. How far were those camps from your place, generally speaking?

Mr. HYDE. The first one was about $1\frac{1}{2}$ miles.

Mr. FREAR. And the farthest?

Mr. HYDE. About 11 miles. Of course, when the farthest one was constructed we had the railroad running.

Mr. FREAR. And they did not use the sleds then?

Mr. HYDE. Not after that.

Mr. FREAR. How many of these camps were there?

Mr. HYDE. There were B, C, D, E, and F.

Mr. FREAR. How large a force did you have at your place?

Mr. HYDE. Over a thousand men.

Mr. FREAR. At that one place?

Mr. HYDE. Over a thousand men at all the camps.

Mr. FREAR. And what were they engaged in doing?

Mr. HYDE. Constructing the railroad, mostly, and felling spruce.

Mr. FREAR. What was the railroad they were constructing?

Mr. HYDE. First we laid corduroy roads. There were planks that would come from Hammond Bros. Lumber Co.

Mr. FREAR. Where were they?

Mr. HYDE. They had one lumber company and camp there.

Mr. FREAR. Where were they with reference to Clatsop?

Mr. HYDE. Four miles northwest. Then there was another lumber camp of the Hammond Lumber Co. also.

Mr. FREAR. What railroad was built?

Mr. HYDE. The railroad was built from headquarters to two of those camps, from Camp 1-A at Clatsop.

Mr. FREAR. Were supplies carried over it?

Mr. HYDE. Not until later. It took a long time to get the spruce out.

Mr. FREAR. I do not think I knew about that railroad before. How long a road was it?

Mr. HYDE. There were 11 miles of the main line, and 22 miles of branch lines.

Mr. FREAR. Was that completed at the time of the armistice?

Mr. HYDE. No.

Mr. FREAR. Did they have any equipment?

Mr. HYDE. Yes; about 11 locomotives there.

Mr. FREAR. And cars also?

Mr. HYDE. And a number of cars.

Mr. FREAR. For the purpose of bringing out spruce?

Mr. HYDE. Yes; and bringing in rails also.

Mr. FREAR. Who had that contract? Do you know?

Mr. HYDE. I understand it was Porter Bros.

Mr. FREAR. They were the people who were getting out the spruce?

Mr. HYDE. Yes.

Mr. FREAR. That was on a cost-plus basis, you understand?

Mr. HYDE. Yes, sir.

Mr. FREAR. What did you observe while you were there in addition to what you have stated in regard to the handling of supplies, or in regard to the performance of the contracts?

Mr. HYDE. I remember that road was laid when we first came there, about February 4, and about a day or two after that, February 5 or 6, 1918, they commenced building this corduroy road, and they got the planks from the Hammond Lumber Co., and the planks came in 4 and 5-inch thicknesses, and 8, 10, 12, 14, and 16 feet lengths, and we would lay off a distance of about a mile and a half.

Mr. FREAR. For logging purposes?

Mr. HYDE. The intention was to move all the spruce out with automobile trucks, and the Government sent down 12 trucks at first, but later on they had twice that number.

Mr. FREAR. They used that plank road?

Mr. HYDE. These planks were all made by hand, and it took from 3 to 5 minutes to cut a plank to conform to the width required.

Mr. FREAR. What was done with those planks afterwards, were they used?

Mr. HYDE. They were taken up after the railroad was laid.

Mr. FREAR. Was any use made of them by the trucks?

Mr. HYDE. At the very beginning the trucks ran out part way to camp, within about a mile and a half or a little bit less.

Mr. FREAR. That might have been necessary for the purpose they originally expected to use them for?

Mr. HYDE. That was necessary to be done.

Mr. FREAR. They expected originally to use the trucks?

Mr. HYDE. Yes; because there was no intention of laying the railroad at first.

Mr. FREAR. That was before the purpose of laying the railroad had been formulated?

Mr. HYDE. I think so.

Mr. FREAR. What was the purpose of using hand labor?

Mr. HYDE. I do not know, unless it was that they had enough men; they had more men than they needed.

Mr. FREAR. How many men did they have?

Mr. HYDE. In the beginning they had over 200 men; near about 200 men.

Mr. FREAR. How did they get these planks, were they sawed originally?

Mr. HYDE. In those lengths of 8, 10, 12, 14, and 16 feet; and the road required only 8 feet to be used, but sometimes we would cut it 12 and 14 feet for use in certain places.

Mr. FREAR. You spoke of hewing them?

Mr. HYDE. We sawed them with a buck saw.

Mr. FREAR. I thought you spoke of hewing them, before.

Mr. HYDE. No; I did not say anything about hewing. They were just cut across, making them to conform to the width of the road.

Mr. FREAR. Have you any way of determining the value of the goods that were thrown away, as you say; that is what would be the difference between the cost of the goods as shipped by you and as received by the various camps? There ought to have been some account kept of that, ought there not?

Mr. HYDE. There ought to have been, but there was no account kept, because Mr. Smith simply told the clerks of the subcamps that they were delivered, and the matter was ended.

Mr. FREAR. Did they not report to you what was not delivered?

Mr. HYDE. Yes.

Mr. FREAR. And the difference between what they would report and what you had shipped was the loss that would go to the Government?

Mr. HYDE. Yes, sir.

Mr. FREAR. Was there no way to check that up?

Mr. HYDE. It was not checked up as far as I know.

Mr. FREAR. Have you any means of determining what that would be?

Mr. HYDE. No.

Mr. FREAR. Would it mount into hundreds or thousands of dollars?

Mr. HYDE. I do not think it would run into thousands; it might run into hundreds.

Mr. FREAR. I notice in your letter which you sent to me there is some suggestion about macinaws that were used by the men.

Mr. HYDE. As to the clothing that was sold to the men, Porter Bros. sold clothing to the men.

Mr. FREAR. They had the contract, and they sold clothing to the men?

Mr. HYDE. To the men; yes.

Mr. FREAR. Who furnished them the clothing?

Mr. HYDE. They purchased the clothing from different people. I understand that was not connected with the contract, but they did it just as an accommodation.

Mr. FREAR. What was it about the selling of the macinaws to the men?

Mr. HYDE. They overcharged the men, and the men complained quite a little.

Mr. FREAR. Describe what the overcharge was.

Mr. HYDE. A number of macinaws were sold to the men for \$8 and \$10, and later on the men found a \$5 price mark inside of the macinaws, and they would bring them down and complain, and they would tell their commanding officers, and the commanding officers would complain.

Mr. FREAR. What was done?

Mr. HYDE. Nothing. They would tell them they could not get them any cheaper.

Mr. FREAR. That was true as to all the macinaws sold?

Mr. HYDE. Yes; and Mr. Smith told us to tell the men that we charged them a little bit less than the retail stores charged for the macinaws.

Mr. FREAR. Did you have these macinaws for sale?

Mr. HYDE. I did.

Mr. FREAR. What were you charging?

Mr. HYDE. Mr. Smith fixed the price. He tried to ascertain what the price at Seaside was.

Mr. FREAR. What was the price as compared with the price fixed by Porter Bros.?

Mr. HYDE. It was about the same.

Mr. FREAR. He fixed the price at \$10?

Mr. HYDE. At \$10 if they were selling for \$10 at Seaside or other places.

Mr. FREAR. Irrespective of what they were purchased for by the Government?

Mr. HYDE. Yes. I understand they were supposed to sell to the men at 10 per cent above cost, but instead of doing that they charged a little less than the retail stores did at Seaside.

Mr. FREAR. Have you any idea as to what the additional charge was over the cost price; could you determine from the marks upon the goods in any way.

Mr. HYDE. I could just guess at it; it would just be two or three dollars in each case.

Mr. FREAR. On each mackinaw?

Mr. HYDE. Yes.

Mr. FREAR. That was charged to the soldiers?

Mr. HYDE. Yes; and deducted from their pay at the end of the month, and there was much complaint because many did not know what they were going to be charged and bought more than they needed, whereas if they had known what they would have been charged they would have bought less.

Mr. FREAR. You say they had 11 locomotives on this 11-mile line?

Mr. HYDE. Yes.

Mr. FREAR. Were they all in use?

Mr. HYDE. No; they were out of commission most of the time. They were obsolete and old.

Mr. FREAR. Do you know who they were purchased from?

Mr. HYDE. From Porter Bros. They were used on another job.

Mr. FREAR. They were purchased by the Government for Porter Bros. at this cost plus?

Mr. HYDE. I think so; I am not positive.

Mr. FREAR. What kind of locomotives were they?

Mr. HYDE. Shay and Heisler locomotives.

Mr. FREAR. Were they used for hauling cars?

Mr. HYDE. They were the standard locomotive gear drive. They were driven on one side, and I have been told by engineers that they should have had a gear drive on both sides.

Mr. FREAR. Porter Bros. had a contract for taking out the timber, and they used them to take the timber out under their contract?

Mr. HYDE. They were out of commission most of the time, because they were too old.

Mr. FREAR. Because they were too old, or because the business had not been developed sufficiently?

Mr. HYDE. They were too old. They were being repaired most of the time.

Mr. FREAR. What do you know, if anything, regarding the question of the crews on the line for surveying the roads; was there any difference between the men on the line and the surveying parties?

Mr. HYDE. There was a lot of friction between the surveying parties and the foremen.

Mr. FREAR. You state what you know about that, and we will determine its relevancy.

Mr. HYDE. We would lay our grades accurately——

Mr. FREAR. Who was that?

Mr. HYDE. The surveying party. After March 1 I was assigned to the surveying party and from March 1, I think, we were sent back to Vancouver about December 15, 1918.

Mr. FREAR. What grades were you laying?

Mr. HYDE. We surveyed the grades of this main line, and the branches, about 11 miles of main line, and 22 miles from Clatsop and these various subcamps.

Mr. FREAR. What occurred in regard to the difference?

Mr. HYDE. We would lay our lines, and the drivers would come along and run over the marking stakes and tear them up, and we would relay them sometimes four or five times, and two or three times we laid some as often as seven times.

Mr. FREAR. Was that done purposely?

Mr. HYDE. It was done because the foremen were inclined to dispute our survey.

Mr. FREAR. Was there any difference in judgment, so far as came to your knowledge, between the foremen and yourselves as to laying the grade?

Mr. HYDE. Sometimes the foremen would not follow the center line.

Mr. FREAR. Why not?

Mr. HYDE. Because it was probably hard to curve the rails according to the center line, and sometimes they would say the surveyor was wrong, and they would use their own judgment.

Mr. FREAR. What was the effect of that difference of opinion. did it interfere with the efficiency of the railroad?

Mr. HYDE. In some cases it did not, and sometimes it did. Sometimes we had to straighten it out after it had been laid. Sometimes the trains were derailed, and I have been told by other surveyors that the reason was because they had not used the original line.

Mr. FREAR. These were employees of the company, I take it?

Mr. HYDE. Yes.

Mr. FREAR. And you were an employee of the Government?

Mr. HYDE. Yes; I was in the Army, although, the man at the head of the surveying department was a civilian. The last two or three months they made him a captain.

Mr. FREAR. I notice a suggestion about a difference between the rails, that they varied in size. That might come about because of the supplies that Porter Bros. had on hand?

..

Mr. HYDE. And because they were furnished by different contractors. They had contractors working under them who would furnish their own rails.

Mr. FREAR. That was under their contract?

Mr. HYDE. Yes, sir.

Mr. FREAR. Were there any spur tracks or side tracks that were not necessary?

Mr. HYDE. I think some of them were not necessary. Sometimes we would see only two or three spruce trees where there was a spur. They may have had some particular reason for building them there.

Mr. FREAR. The theory of any such criticism would be that if they were making such side tracks it would be to their advantage to build them there, to build unnecessary spurs or side tracks?

Mr. HYDE. That was a rumor among the camps there. We used to have a little saying: "Another spruce, another spur," because sometimes we could only see one or two spruce at the head of a spur. Then in one case we ran a spur into Crown Willamette Camp. This company also had a track for their own spruce. This is hearsay, however.

Mr. FREAR. Did you see this spur there?

Mr. HYDE. Yes; I ran the spur in. There was friction between the Crown Willamette Co. and Mr. Yeon, the head of the Spruce Division. I understand there was some friction between them, and he told them that unless they could get out a certain amount of spruce he would run in a spur, and later he did.

Mr. FREAR. Who paid for the spur that was run in?

Mr. HYDE. The Government. That was run in through Porter Bros.

Mr. FREAR. As a part of their cost-plus contract?

Mr. HYDE. Yes; and the object was to take the spruce out from the Crown Willamette Co.'s property.

Mr. FREAR. What about that riving?

Mr. HYDE. At the beginning all this spruce was split up into two or three different parts, and it was held for several months, because the railroad was not completed, and when the road was ready they found notches in the spruce.

Mr. FREAR. The criticism is that the timber was rived before it was sent out.

Mr. HYDE. They determined later on that it could not be used at all.

Mr. FREAR. Did they bring out this timber that was rived?

Mr. HYDE. They took out some of it; I think very little. Most of it stayed in the woods.

Mr. FREAR. That was taken out and to a great extent rived in the woods?

Mr. HYDE. Yes.

Mr. FREAR. Who did that work?

Mr. HYDE. A man by the name of Disk.

Mr. FREAR. But who had the work done?

Mr. HYDE. Porter Bros.

Mr. FREAR. They had the contract for the riving, and also the contract for the transportation?

Mr. HYDE. Yes.

Mr. FREAR. In other words, the criticism is because they did the riving before there was any means of getting the logs out of the woods?

Mr. HYDE. Yes, sir.

Mr. FREAR. What else have you in mind as connected with this matter? What period were you out there?

Mr. HYDE. From February 4, 1918, until about December 5, 1918.

Mr. FREAR. Were you at Clatsop all the time?

Mr. HYDE. I went to the farther camp. I was at Camp F. when we finished; the last camp.

Mr. FREAR. But you were near one of these four camps you mentioned?

Mr. HYDE. I would always be at the farthest camp.

Mr. FREAR. What was your position?

Mr. HYDE. I was a private.

Mr. FREAR. Were you a working lawyer before you went into the service?

Mr. HYDE. Yes.

Mr. FREAR. And you took a position as private?

Mr. HYDE. Yes.

Mr. FREAR. And you remained throughout the war?

Mr. HYDE. I worked through the entire period.

Mr. FREAR. Were the soldiers out there paid the same as the civilian employees; the civilian labor?

Mr. HYDE. No; the civilians were paid more.

Mr. FREAR. What were the civilians paid for the same kind of labor that you were performing?

Mr. HYDE. The civilians were all foremen and they were getting \$8 and \$10 a day.

Mr. FREAR. What were the soldiers getting?

Mr. HYDE. From \$3.60 up to \$5 or \$6.

Mr. FREAR. What were you getting?

Mr. HYDE. I was getting \$4.

Mr. FREAR. Out of that what did you have to pay?

Mr. HYDE. I had to pay \$1.05 a day to Porter Bros. for my meals.

Mr. FREAR. That was an arbitrary price they charged?

Mr. HYDE. Yes.

Mr. FREAR. What else did you have to pay?

Mr. HYDE. I had to pay for my clothes, my shoes, and slickers.

Mr. FREAR. What did you sleep in?

Mr. HYDE. In tents, on cots.

Mr. FREAR. They furnish tents and cots?

Mr. HYDE. No; the Government furnished the cots. We took cots with us.

Mr. FREAR. The Government furnished the tents?

Mr. HYDE. Porter Bros. did. I understand that Porter Bros. got them from the Government. They were the same tents that had been used at Vancouver.

Mr. FREAR. Was there any criticism about the treatment the soldiers had there as to caring for the men by Porter Bros. or any other contractors?

Mr. HYDE. They often complained they were overcharged for their meals, and they did not get credit for meals that were lost. We would not get credit unless we missed three meals, and whenever we lost five meals we only got credit for three.

Mr. FREAR. What else have you in mind about your experience out there? By the way, riving is splitting of logs instead of having them sawed, in order to get the grains straight?

Mr. HYDE. Yes. Most of the grain was warped.

Mr. FREAR. Was there anything else you wanted to speak of?

Mr. HYDE. I remember 1 acre that was cleared near the reservoir out there, I guess, about $2\frac{1}{2}$ miles from Camp A. They had 50 men working two weeks clearing 1 acre, which must have cost several thousand dollars.

Mr. FREAR. What was that done for?

Mr. HYDE. Taking out the stumps.

Mr. FREAR. For what purpose?

Mr. HYDE. For the purpose of running the main line of the railroad through later on.

Mr. FREAR. You say that cost several thousand dollars to run the railroad through?

Mr. HYDE. Yes, sir.

Mr. FREAR. Was that done by Porter Bros?

Mr. HYDE. Yes.

Mr. FREAR. What was their purpose?

Mr. HYDE. I understand it was because they did not have enough teams to pull out those stumps by machinery.

Mr. FREAR. They were paid on a cost plus basis for all this work?

Mr. HYDE. Yes.

Mr. FREAR. Where was this?

Mr. HYDE. The reservoir was about $2\frac{1}{2}$ miles from Camp 1-A.

Mr. FREAR. That is where you were, at Clatsop?

Mr. HYDE. At that time I was out at Camp C. I had come out in surveying from there on.

Mr. FREAR. Where was Camp 1?

Mr. HYDE. Camp 1 was at Clatsop.

Mr. FREAR. How long were they engaged in tearing up that acre, and how many men did they employ?

Mr. HYDE. They employed approximately 50 men for two weeks.

Mr. FREAR. Were you there?

Mr. HYDE. I was there almost every day. We talked about it, and Mr. Kuney, who was at the head of the surveying department, tried to find out what that acre cost, and finally he said it was between \$2,000 and \$3,000, and he said the maximum price ought to be \$250.

Mr. FREAR. That relates to the criticism as to the Porter Bros.' method of performing a contract?

Mr. HYDE. Yes. There was also criticism, because they did not use steam shovels. They did all the excavating by hand.

Mr. FREAR. Did they have steam shovels?

Mr. HYDE. Toward the end they had a steam shovel.

Mr. FREAR. In other words the criticism you make is that they were not properly equipped to do the work they had undertaken?

Mr. HYDE. Yes. They also used dynamite very freely out there. They would put four to seven sticks of dynamite under a stump of a tree. I understand it is necessary to put only two or three at the most.

Mr. FREAR. How did that come about?

Mr. HYDE. Through the carelessness of the foremen.

Mr. FREAR. Or the ignorance of the man who was doing the work?

Mr. HYDE. It was due to the foremen. They were not checked in their use of dynamite.

Mr. FREAR. Have you anything else in mind?

Mr. HYDE. No, sir.

Mr. FREAR. I wish to state that it is agreed that the further examination by other members of the committee will be taken up later, Mr. Hyde, in order to permit us to examine other witnesses who are present at this time. If you will wait, Mr. Lea wants to ask some questions of you later on.

TESTIMONY OF MR. CHARLES R. SLIGH.

(The witness was duly sworn by Mr. Frear.)

Mr. FREAR. Where do you live, Mr. Sligh?

Mr. SLIGH. Grand Rapids, Mich.

Mr. FREAR. How long have you lived there?

Mr. SLIGH. I was born there.

Mr. FREAR. What is your business?

Mr. SLIGH. I am a manufacturer of furniture.

Mr. FREAR. How large a business have you there?

Mr. SLIGH. We employ 800 men.

Mr. FREAR. At the time of the beginning of the war, you were engaged in the manufacture of furniture?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Now, kindly go on, in your own way and tell the committee your own experience, and we will interject such questions as may occur to us.

Mr. SLIGH. I have a memorandum here, and if you should like to have me do so I can use it.

Mr. FREAR. Just take your own time, and in your own way make your statement.

Mr. SLIGH. Previous to the declaration of war I had taken training at Plattsburg, and I was anxious to get into active service, and had gone to Washington in April, as soon as war was declared, in hopes of being commissioned a lieutenant colonel to raise a regiment in Michigan, and the bishop of western Michigan went with me, as he was anxious to become chaplain of the regiment. At that time I met Dr. Stratton, of the Bureau of Standards, who was having great difficulty in getting spruce for testing purposes. I told him I could get it for him, and I telegraphed to my son-in-law, who was in the lumber business at Seattle, and I had the spruce expressed to our mills, and then they expressed it to Washington. This was done so quickly that Dr. Stratton was very much impressed, and he told Mr. Coffin, who was shortly afterwards looking for men to take charge of that work—

Mr. FREAR. He was then the head of the Aircraft Department?

Mr. SLIGH. Yes; and Mr. Coffin had told him he had had great difficulty in getting good results from the lumber committee.

Mr. FREAR. You refer now to a committee out West?

Mr. SLIGH. No; a subsidiary committee of the Council of National Defense, of which R. H. Downan was chairman and they were presumed to represent the entire lumber interests of the United States. They were a voluntary committee, working on a dollar a year basis, and most of them, and I say it advisedly, were profiteers; and Mr. Coffin had been trying to get results from them and had absolutely failed, and Dr. Stratton had been told his troubles, and Dr. Stratton told him if he would get Sligh he would get results. So, he wanted me, and I went to Washington, and he asked me to return and take charge of this work.

Mr. FREAR. When was that?

Mr. SLIGH. June 17, 1917, and I immediately took charge of it, and I called meetings of the aircraft manufacturers, and of the spruce dealers.

Mr. FREAR. At Washington?

Mr. SLIGH. At Washington, in my quarters in the Munsey Building at that time, and we made some preliminary arrangements in regard to aircraft lumber specifications. Later, in July, we invited the spruce manufacturers of the coast to send representatives to Washington, and they sent Mr. Douty, president and principal owner of the Mudi-Nomah Lumber & Box Co., at Portland, Oreg. He had been a manufacturer of spruce for many years. Also Mr. Howard Jayne, who was a manager of the Willopa Lumber Co., and those two gentlemen had been selected by the spruce manufacturers to represent them in Washington. We called what we designated at that time, our international conference, which consisted of representatives from France and England and Italy and representatives from the Forestry and Engineering and one or two other departments of the Government and the Aircraft Board, and there were something like 25 representatives of the spruce manufacturers of North Carolina and West Virginia, which produce considerable spruce.

The conference lasted for several days, and at the end of that time we had agreed upon what we called our Specifications No. 1, which provided for aircraft spruce, and Mr. Jayne and Mr. Douty made a price on behalf of the manufacturers of \$105 per thousand.

Mr. FREAR. For airplane purposes?

Mr. SLIGH. Yes, and also for wing beam stock at \$150 a thousand. This was a higher price than they had been receiving, by somewhere around \$15 to \$20, but we recognized the urgency of the case and agreed to pay it to them.

Mr. FREAR. These men had been furnishing lumber for airplane purposes to the Government?

Mr. SLIGH. Both of them. It would be furnished directly to the Government. At that time all of the spruce had been sold by the millmen to brokers and by the brokers to the Government.

Mr. FREAR. That was true of the various countries, the supplies furnished to England and other countries?

Mr. SLIGH. Yes, sir. England had five or six brokers out on the coast bidding against each other for English production. France was buying her spruce largely at that time through these English brokers, also. Italy had confined her purchases entirely to one broker.

Mr. FREAR. How were we buying?

Mr. SLIGH. At that time we were not buying. This was at the beginning, shortly after war was declared. Curtiss and the L. W. F. Co. and Dayton-Wright, and others, Glenn-Martin, were buying through these brokers just the same as the other countries were. None were buying direct. The brokers had contracts with the middlemen, ranging from \$35 up to \$90 for this lumber. Some of these contracts had been running for a year and a half or two years. That was their price per thousand feet. The Willopa Lumber Co. had a contract with one broker at \$35 a thousand feet.

Mr. FREAR. What part of that would the company get, and what proportion would go to the brokers, if you know, generally speaking? The committee wants to know the general plan that was pursued prior to our entry into the war.

Mr. SLIGH. At that time the airplane manufacturers in this country were buying their supplies through these brokers. Curtiss got 4,000,000 feet of John L. Alcock, of Baltimore, in May, a broker. He called himself a merchant, and he was a man of financial responsibility, and he is a man who ought to be put on the stand, because he has the most extensive knowledge of any man in the country in regard to spruce which was delivered largely in West Virginia and North Carolina. He sold Curtiss 4,000,000 feet, for which Curtiss agreed to pay \$200 for the wing beam and \$140 for the G list.

Mr. FREAR. Do you know what price he paid?

Mr. SLIGH. That price was for delivery to Curtiss at Buffalo. Mr. Alcock told me that later that lumber cost him \$152 for the wing beam stock and \$112 in Buffalo for the G list.

Mr. FREAR. The difference was his profit?

Mr. SLIGH. He made \$48 a thousand on one and \$28 on the other.

Mr. FREAR. Getting back to the original proposition, you proposed to get in immediate touch with the lumber men.

Mr. SLIGH. The Signal Corps itself had made a purchase in May from Cheltham & Co., of New York, on specifications that required Alaska spruce. Instead of the Signal Corps buying from somebody out on the coast they went to New York to a broker and paid \$200 a thousand for inferior quality, for delivery at Langley Field at Hampton. Those are the conditions that existed when I took charge, and I recommended on the 22d of June to Mr. Coffin—I was at that time conducting all my business with Mr. Coffin as the chairman of the Aircraft Board—I recommended to him in a written communication that we eliminate the brokers absolutely, and that we adopt airplane specifications suitable expressly for airplane work. And that the Signal Corps should be the only purchasers of spruce in the United States, thereby eliminating the brokers, not only for manufacturers in this country, but also for France and England and Italy, and that they should make their purchases through us; and I also made in that communication a recommendation that this lumber be subject to condemnation on the coast, eliminating the waste.

Previous to the time that I took charge, the manufacturers of the United States had been buying about a thousand feet of the mills to get wood enough for one of the Curtiss training planes. There was actually 169 feet of lumber in a training machine, and they were buying a thousand feet to get back.

Mr. FREAR. What was the reason for that?

Mr. SLIGH. Because they were buying on what was known as the G list, which included an inferior quality of lumber, only about 15 per cent of which was suitable for airplane purposes.

Mr. FREAR. What was done with the other 85 per cent?

Mr. SLIGH. At the time I took charge, Curtiss had piled up in his yard 150,000 feet of lumber which he could not use, and there is a letter on file in the department at Washington from one of the English departments stating that they had purchased the year previous, 1916, 2,440 feet to get enough for one plane.

Mr. FREAR. Which would require 169 feet of actual timber?

Mr. SLIGH. They were using for their planes probably an average of 600 or 700 feet, because they were making other planes besides the training plane.

Mr. FREAR. Then you proposed to put in force these changes?

Mr. SLIGH. We proposed to eliminate that waste?

Mr. FREAR. Both to stop buying through the brokers, and also getting a better quality of material?

Mr. SLIGH. Yes. At this international conference which I have spoken of, I took up these questions in detail, and we spent nearly a week on them, and we agreed that this specification, which we afterwards called No. 1 specification, under which 500 feet was enough to provide for a Curtiss airplane.

Mr. FREAR. For this 169 feet that you spoke of?

Mr. SLIGH. Yes. So, it reduced the cost more than half. We figured at that time that it would probably take 600 feet, and Mr. Clementz, of the Dayton-Wright Co., and some one from the L. W. F. Co., confirmed my idea that 500 feet would be sufficient. If you will refer at your leisure to the first report of the Council of National Defense, which was printed under date of June 30, but which was not actually printed until September, as a matter of fact, you will find an article in there lauding my work. It did not mention me personally by name, but they gave the fact that these things had been accomplished at a saving of 50 per cent to the Government. You will find that in their official report.

Mr. FREAR. I recollect that; we had the Council of National Defense officers before our general committee.

Mr. SLIGH. As soon as I took charge there I recognized the fact that the one thing the Government had got to do was—and this stirred up considerable friction—to ask permission to make a preliminary purchase of 5,000,000 or 6,000,000 feet. We asked that of the Aircraft Board, and Mr. Harris could find more objections to expediting things than any lawyer I ever ran across.

Mr. FREAR. In Washington?

Mr. SLIGH. He was; and he advised Mr. Coffin. While that was the one thing they had to have, they could not find any method of buying, although they had at that time an appropriation of \$43,500,000.

Mr. FREAR. That was due to red tape, principally, that had to be cut?

Mr. SLIGH. And he advised that they had no authority to appropriate \$500,000 for that purpose. So, I did not get it.

Mr. FREAR. This was when?

Mr. SLIGH. This was about the 22d of June, 1917; a month later when we had this international conference, in my report I asked for permission at that time to purchase 40,000,000 feet. The same objections were raised by Mr. Harris, and I did not get any authority to make any purchase whatever of spruce until the 10th day of August?

Mr. FREAR. Why?

Mr. SLIGH. Simply because they said there was not any appropriation available; yet at that time there was pending the \$160,000,000 bill in Congress.

Mr. FREAR. But we had \$43,500,000 that was to be used for aircraft purposes in the appropriation just made previous to that. What was the reason for the failure to appropriate the money to buy spruce or aircraft material at that time?

Mr. SLIGH. The only reason Mr. Harris gave, in my presence, was that this appropriation of \$43,500,000 has already been expended in contract with Curtiss and Dayton-Wright and L. W. F., and half a dozen other people, a lot of which money could not have been expended for a year, and that there would not be any fund available until the \$640,000,000 appropriation was approved.

Mr. FREAR. What was the character of the expenditures of these various companies?

Mr. SLIGH. They had made contract with these companies, he said.

Mr. FREAR. They were commitments which would take at least half a year?

Mr. SLIGH. Which would take over a year.

Mr. FREAR. I mean even at that time.

Mr. SLIGH. In ordinary business; since it would have taken about six or eight months, and some concerns did not have in their plants at that time the spruce to execute these contracts.

Mr. FREAR. Were those facts brought to Mr. Harris's attention?

Mr. SLIGH. Yes.

Mr. FREAR. I repeatedly had interviews with Mr. Coffin and with Mr. Harris. And Mr. Harris was the legal advisor of Mr. Coffin.

Mr. FREAR. What was Harris at that time?

Mr. SLIGH. He was a lawyer, Julian H. Harris; he was a friend of Mr. Coffin's, and Coffin had taken Harris down there as his legal advisor.

Mr. FREAR. The whole of two months, from June until what time?

Mr. SLIGH. August 10.

Mr. FREAR. Nearly two months elapsed before the spruce was purchased?

Mr. SLIGH. Before there was a single foot of spruce purchased on behalf of the United States.

Mr. FREAR. And that was based on Mr. Harris's objection?

Mr. SLIGH. Yes, sir; and that was four months after war had been declared. As a matter of fact I had taken in the meantime vigorous measures to acquaint myself with the facts in connection with this business, and also the facts as to most of the spruce manufacturers in the United States. I had personally inspected mills in West Virginia and North Carolina from information that was accessible in Washington; so when I did get this permission on the 10th day of August I had a list of the spruce manufacturers of the United States, and I immediately wired them to purchase that day and at this price of \$105. Nearly all of them had contracts with brokers, running from \$35 to \$90, and the brokers threatened that if they did not execute their contracts they would prosecute them. Mr. Howard Jayne had a contract as low as \$35, which had been executed two years before, and all these brokers were insistent that they would not stand by and let the needs of the United States be supplied.

Mr. FREAR. They would not stand by and let the needs of the United States be supplied? What do you mean by that?

Mr. SLIGH. When this order was sent out for 40,000,000 feet on the 10th day of August, it was proportioned for each mill according to its capacity. I had a memorandum from all the mills which they had furnished me with regard to their capacity. We had taken that list, and assigned to each one their proper proportion of this 40,000,000 feet, and these brokers threatened that if those mills filled our orders first they would prosecute them for nonfulfillment of their contracts. It was for that reason that on the 6th day of September we commandeered all the spruce in the United States.

Mr. FREAR. You mean, the Government commandeered this spruce?

Mr. SLIGH. The Secretary of War. I have a copy of that, but if I can not give it to you now it will be available. The Secretary of War and the Secretary of the Navy signed that. That resolution was drafted in the office of the director at my suggestion, and I took it to Mr. Coffin, and it was signed by Mr. Coffin, by Col. S. D. Waldon, by R. E. Lovett, and Gen. George O. Squire.

Mr. FREAR. The Chief Signal Officer?

Mr. SLIGH. His signature was attached before the Secretary of War would sign it.

Mr. FREAR. That was when?

Mr. SLIGH. On the 6th day of September, 1917, when every mill in the United States was commandeered.

Mr. FREAR. That was for the purpose of avoiding these brokers' contracts, notwithstanding they claimed they would hold the manufacturers for damages?

Mr. SLIGH. Yes. That made it possible for the millmen to ship their product to the United States Government and to give priority, and it gave them a privilege of filling their orders at some distant time with the brokers. The brokers raised a considerable row about it, and Mr. Harris advised the Aircraft Board that the brokers had a legal claim against somebody for the nonfulfillment of the contracts. He said they had a claim either against the millmen or against the Government.

Mr. FREAR. Mr. Harris, acting on the part of the Government, told the brokers that they had a legal claim against the United States Government?

Mr. SLIGH. He told the department that somebody had a legal claim.

Mr. FREAR. Did he file such a report?

Mr. SLIGH. No; it was a verbal report. It was made in my presence. So I adjusted the matters with the brokers. I told them that if they would come to me with a proposition that they would accept 60 per cent of their orders, on the theory that 600 feet, under our new airplane specifications, would do as much work as a thousand feet under the old list, if they would accept that, I would reinstate their orders, and that would avoid any litigation against the Government. About 80 per cent of them did that, and they were able to do it because they had sold their spruce to foreign governments at good prices and they could pay our \$105 price and make a profit. So about 85 per cent of them did it.

The strike of the I. W. W. occurred about the time of the international conference, the 24th or 25th of July, and it immediately interfered with production in the State of Washington. The

governor of Washington, Gov. Lister, was a sympathizer with the I. W. W.'s and he exerted no effort whatever to furnish the spruce the Government desired. The governor of Oregon did.

Mr. FREAR. The governor of Oregon did?

Mr. SLIGH. Yes. I have forgotten his name, but he guaranteed protection, and there was practically no interference with spruce operations in the State of Oregon.

Mr. FREAR. He guaranteed protection to the manufacturers?

Mr. SLIGH. Yes, sir. And to the logging camps. The only difficulty in Oregon was the shortage of men. While Mr. Douty and Mr. Jayne were in Washington—they came to me after this conference and before they left—and they gave me a bunch of telegrams they had just received about these I. W. W. troubles which began while they were there. I turned them over to Mr. Coffin, and we spent a half an hour in his office, and they explained the situation, and Mr. Coffin said he would take those to the Secretary of War and attempt to get troops detailed there to preserve order. The spruce production in Washington was largely concentrated in a little section at Grays Harbor and Willapa Harbor and they assume that if they had four companies of United States troops the disturbances would be entirely quelled.

Mr. FREAR. That was the only place they were operating at that time?

Mr. SLIGH. Seventy-five per cent of the spruce production was produced in this small district, and about the other 25 per cent was produced in Oregon. Mr. Coffin told me afterwards that the Secretary of War had refused to send troops for that purpose, and instead of doing that the Secretary of War himself sent a wire out there advising them to yield to the I. W. W.

Mr. FREAR. You are acquainted with that fact, are you? Did you see the telegram?

Mr. SLIGH. No, but it was a matter that was given publicity at the time.

Mr. FREAR. Do you know the wording of it?

Mr. SLIGH. It was reported to me that the wording of it was that the Secretary of War recommended that the demands of the workmen be granted.

Mr. FREAR. About what time was that telegram?

Mr. SLIGH. That was along early in August.

Mr. FREAR. And sent to whom?

Mr. SLIGH. I think it was sent to a committee of lumbermen in Washington who had telegraphed for protection. Mr. Coffin informed me himself that the Secretary of War had refused to give that protection. It necessitated, of course, a fight. The lumbermen were not willing, at that time, to grant their demands, and it resulted in a six weeks' contest there, and during that time the production of spruce in Washington was practically at a standstill.

Mr. FREAR. It was due to the failure to get sufficient labor; that was the labor situation?

Mr. SLIGH. It was due absolutely to the I. W. W., and during that time the production of spruce was curtailed very materially there, so that in August and September we only got about 2,000,000 feet, at which time we should have gotten three times as much.

Mr. FREAR. Six million feet each month if the mills had run at capacity?

Mr. SLIGH. Yes, if they had been supplied with labor.

Mr. FREAR. You were familiar with the conditions previous to that so you knew what would be the subsequent effect?

Mr. SLIGH. Yes, I was very familiar with that country, because I have been out there a dozen times in the last seven or eight years previous to 1917. I am the principal owner and president of two companies that own nearly a billion feet of timber in Washington and Oregon. We do not own any spruce and never have. Those are located in Snohomish County, Wash. It contains nearly a billion feet of timber, but it is all fir and there is no spruce. So I was perfectly familiar with those conditions on the coast, but I never owned a foot of spruce, and I do not intend to.

Mr. FREAR. You had subsequently the passing upon contracts for the furnishing of furniture to the Government?

Mr. SLIGH. Yes, sir.

Mr. FREAR. How much was involved?

Col. SLIGH. Col. Waldon came to me and gave me a list of furniture that was desired for the cantonments that were being built throughout the United States, some 23 of them.

Mr. FREAR. When was that?

Mr. SLIGH. I think that was in July.

Mr. FREAR. In 1917?

Mr. SLIGH. Approximately, about July.

Mr. FREAR. What was the amount.

Mr. SLIGH. The total purchase I made for that was in the vicinity of about \$75,000 or \$80,000.

Mr. FREAR. You were in the furniture business yourself?

Mr. SLIGH. I am a furniture manufacturer.

Mr. FREAR. What proportion of that did you take?

Mr. SLIGH. We took about \$1,200 of it, because there was a lot of chiffonieres required that they could not get anywhere else. It was a very small amount, and it was all odd pieces. I was not looking for business for my company.

Mr. FREAR. What is your capitalization?

Mr. SLIGH. We only have \$600,000 capital, but there is a million and a half in the business, and there is two and a half million a year from it, and we could have produced it all in two weeks' time, but I was not looking for business myself.

Mr. FREAR. You were speaking about your having no spruce out there, and I wanted it to show in the record that you were not interested.

Mr. SLIGH. I was not looking out for the Sligh Furniture Co.

Mr. FREAR. Now, please get back to the labor situation that you spoke of out West.

Mr. SLIGH. The situation in Washington was very bad.

Mr. FREAR. How did it affect you, and what was done?

Mr. SLIGH. It affected the department, so that during the months of August and September only about 2,000,000 feet each month was produced, and the condition was so bad that I wrote a letter to Mr. Coffin, a copy of which I will be glad to furnish you. That was a very serious situation, and I said we must have production. They were drafting men who are used in logging, and we had to have some drastic measures exerted to supply the necessary labor. I wrote that

as a matter of record, so that I would not be held responsible for this delay of five or six months in production.

Mr. FREAR. Continue, Mr. Sligh.

Mr. SLIGH. I think, Mr. Chairman, with your permission, this would be a good time to call your attention to the fact that on account of this contract it was deemed necessary to try and find a substitute for spruce. Up to this time the opinion prevailed that nothing could be used in airplane construction except spruce, and when I went to Washington there was also prevalent the idea they could not use any spruce unless it was air-dried, which took two years, and it was at that time and for that reason I had boards of spruce sent to Grand Rapids to be kiln-dried, and I demonstrated it could be kiln-dried.

Mr. FREAR. How long a period did that take?

Mr. SLIGH. It took about two weeks. And at that time I also asked Mr. Perry here to have his company—he is at the head of the company that manufactures, in our opinion, the best kiln-dried spruce in the United States—and we have come to that opinion because we have used a dozen different kinds in the last 40 years, and I had asked him to make that experiment also, and that was in June, and he can give you in detail his work along that line; but I demonstrated to the satisfaction of everybody it could be done, and I also at that time had some sent to the Forest Laboratory at Madison—

Mr. FREAR. That is in Wisconsin?

Mr. SLIGH. That is in Wisconsin, and had firs sent to Curtiss and to Wright at Dayton for the purpose of seeing if that fir could be used for a substitute.

Mr. FREAR. That is interesting to have in the record, of course, but in the matter of brevity, lets get back to the other subject.

Mr. SLIGH. This will only take a moment.

Mr. FREAR. Proceed.

Mr. SLIGH. So that when the production of spruce fell off so rapidly in August and September, during the I. W. W. strike, they decided it was necessary to find a substitute, and we had demonstrated at that time that fir could be used as a substitute for spruce.

Mr. FREAR. Was that before the laminating was begun?

Mr. SLIGH. Yes, sir; of course, lamination had been used before that, but before it had been authorized.

Mr. FREAR. Yes.

Mr. SLIGH. I made a contract on behalf of the United States Government on the 6th day of September, the 5th or 6th of September—

Mr. FREAR. That is September, 1917?

Mr. SLIGH. September, 1917; and after a conference held in Gen. Carmack's office, the head of the English mission in Washington, in the Munsey Building, with Lieut. Commander Jenkins, his assistant, at a conference with Lieut. Commander Jenkins and Gen. Carmack, George S. Long, of Tacoma, and Mr. Bloedel, of Seattle, we agreed on specifications for air craft.

Mr. FREAR. Mr. Long was secretary of the Weyerhaeuser Co. in Washington.

Mr. SLIGH. The general manager of that company.

Mr. FREAR. And Bloedel was of the firm of Donohue & Bloedel?

Mr. SLIGH. Yes; two of the most prominent manufacturers on the coast, and Mr. Long, on account of years of experience as representative of the Weyerhaeuser interests, which are the largest lumber interests in the world—

Mr. FREAR. Was he at that time connected with any air craft organization?

Mr. SLIGH. He was a member of the lumber committee.

Mr. FREAR. Under the National Council of Defense?

Mr. SLIGH. Yes; he was also the chairman of the Emergency Spruce Committee that was appointed when we first got into this work.

Mr. FREAR. Yes.

Mr. SLIGH. And I had appointed him at the request of another party.

Mr. FREAR. Who?

Mr. SLIGH. At the request of E. T. Allen.

Mr. FREAR. Who was Mr. Allen?

Mr. SLIGH. He was not a lumberman and never had been; he had no executive or manufacturing ability of any character, but he had been made a member of this lumber committee at Washington, and sent down there to hold down the job and see that nothing got away from the lumbermen.

Mr. FREAR. Where is he from?

Mr. SLIGH. He lives in Portland, Oreg. He had been secretary of the Forestry Association and the Weyerhaeuser interests had paid his salary of \$5,000 a year. He was not a lumberman, but at the same time he was in Washington there and he was the man Mr. Coffin had been referred to because he was the only local representative in Washington of the coast interests that Mr. Coffin had been trying to get some results from. He had written several beautiful essays, he was a good writer, but they were so impractical that Coffin could do nothing with him.

Mr. FREAR. Now, get back to this conference that was held there with the parties you named in regard to the substitution of fir for spruce.

Mr. SLIGH. Very well. We agreed on a price of \$55, after we had agreed on specifications—that was the first thing—then I asked Mr. Long and Mr. Bloedel what price they would make. I had myself during the weeks previous made extensive inquiries through friends of mine on the coast as to what it was worth. Mr. Long and Mr. Bloedel went into an adjoining office for a conference, stayed there a few minutes and then came out and said they would take a price of \$55. Mr. Long and Lieut. Commander Jenkins immediately initialed that agreement, and it was left in the office of Gen. Carmack; a contract was made the same day with the fir emergency committee, a west coast organization; they had a representative at that time and an office in the Munsey Building at Washington; the hardwood manufacturers of the South had a similar organization, and the pine manufacturers had a similar organization. They were all centered around this lumber committee who were trying to corral all the business of the Government and dictate the price, but Mr. Bloedel and Mr. Long made that price voluntarily, and I promptly consented because it was a reasonable price.

Mr. FREAR. At that time was the purpose of this substitution to use the fir in the same way as spruce?

Mr. SLIGH. Identically; we had extensive tests made.

Mr. FREAR. For wing beams?

Mr. SLIGH. This was largely for wing beams. We found that fir was about 25 per cent heavier than spruce, and fir 25 per cent stronger in all the tests that were submitted except the shock test; in the shock test, it proved to have no more strength than the spruce, and for that reason we found it necessary to use identically the same dimensions that were used of spruce, which of course gave a little more weight to each machine.

Mr. FREAR. What would be the weight, approximately?

Mr. SLIGH. That weight was only something like—my impression is, it was about 75 pounds to a machine, of what would be known as the Curtiss training machine.

Mr. FREAR. With fir?

Mr. SLIGH. Yes, sir.

Mr. FREAR. What with spruce?

Mr. SLIGH. The weight of fir was 75 pounds more than the spruce.

Mr. FREAR. That is what I wanted to know.

Mr. SLIGH. It required 75 pounds lifting force greater. At the request of Gen. Carmack I had to get them 8,000,000 feet of fir; at the order of Col. Deeds, 3,000,000 feet of fir, and at the request of the French representatives I made a recommendation for four and a half million feet, through this fir committee to authorize Mr. Long and Mr. Bloedel to make the contract; the Italians had previously made a contract for 10,000,000 feet through Mr. Thane, of San Francisco; and the Italians, I want to say, were the only foreign Government that had conducted their work intelligently. They had had extensive tests made by their own experts and other experts, and they knew before we did what fir would do, and they had made this contract for 10,000,000 feet before we made ours. They had confined their purchases through one broker; they did their business on business principles. but after we consummated this agreement they made it through us.

Mr. FREAR. Now, let us hurry along. This is all interesting, but I have some things here of far more importance at this time. We will be very glad to get all that in the record, but let us get back to our original proposition and continue along that line.

Mr. SLIGH. That brings us down to about September. My work had been very highly commended by Gen. Squires. I had been invited to the Air Craft Board on three different times in September. by Coffin and by others, and at the same time Mr. Allen, who had gone out to the coast as our coast representative had proven exceptionally incompetent. On the trip out, he went out with several others, with several of the parties—

Mr. FREAR. Who is this?

Mr. SLIGH. Mr. E. T. Allen, of Portland. He was drunk most of the time, and incompetent all of the time.

Mr. FREAR. Where did you get that information?

Mr. SLIGH. From Mr. A. Dowdy, who was one of the party and who two weeks later telegraphed a long telegram demanding Mr Allen's withdrawal, and which I took to Mr. Coffin, of the lumber committee, and the lumber committee very strenuously opposed it.

Mr. FREAR. That is the lumber committee composed of various manufacturers of the coast and elsewhere?

Mr. SLIGH. Yes, through their representatives; at that time Mr. Worster and Mr. Wisner, they were the two lumbermen who were officially representing the lumber committee in Washington, and they bitterly opposed my action in regard to Mr. Allen and that I was not treating him justly; two weeks later I took a whole lot of correspondence which I had at that time and submitted it to them, which resulted in their writing me a complimentary letter, commending my actions in this matter.

Mr. FREAR. What was the character of the correspondence?

Mr. SLIGH. I will furnish a copy of it, if you desire.

Mr. FREAR. That will be all right, but just briefly state what it was, in the record?

Mr. SLIGH. I had written Allen very fully in regard to what his duties were, in regard to his operations, and for 10 days I had nothing from him but one telegram; and after I had exhibited his telegram and my correspondence, the lumber committee changed their minds, and made up their minds I had treated him all right, but at the same time he was one of their crowd and they were interested in keeping him there. Things kept getting so bad that on the 24th of September, I demanded his resignation, which he sent in the next day.

Mr. FREAR. That is from that lumber association?

Mr. SLIGH. No, demanded his resignation as the representative of the wood section in Portland. He was the man with whom we were doing the business with the spruce manufacturers.

Mr. FREAR. He was not in the employ of the Government?

Mr. SLIGH. Yes, of the Signal Corps, in that capacity.

Mr. LEA. What date was that?

Mr. SLIGH. That was September 24, and he resigned the next day. The result was that George S. Long made his appearance in Washington on the 3d of October. He came there to get my scalp, he said, and he eventually got it. On the 4th of October I was invited to luncheon by Maj. Ledbetter.

Mr. FREAR. Was he a major at that time?

Mr. SLIGH. Yes, Maj. Fred W. Ledbetter.

Mr. FREAR. Who was he, briefly?

Mr. SLIGH. He was a son-in-law of Mr. Pettick, who owned the Portland Oregonian, a very wealthy man; he had formerly been a newspaper reporter, and he spent most of his time at Santa Barbara, Calif., playing polo; he had quite a reputation in that sport.

Mr. FREAR. Mr. Pettick owned the Oregonian, you say; what do you know of his other interests?

Mr. SLIGH. He had extensive real estate interests in Portland and was one of the principal owners of the Crown Paper Co., near Portland, and had quite extensive interests; he has since died, leaving an estate of between ten and eleven million dollars.

Mr. FREAR. How about his banking interests?

Mr. SLIGH. I have records of those and can furnish them, but have not them offhand.

Mr. FREAR. Do you know whether it was the Northwestern National Bank, to refresh your recollection?

Mr. SLIGH. I could not state; I have the records at home; I don't remember his banking interests; he died a few months since, and left Ledbetter \$500, and I understand he is now contesting the will. I was invited to luncheon at Ledbetter's house to meet George S.

Long and Col. Disque; it was the first time I had met Col. Disque and Mr. Ledbetter had impressed me that Disque was a man of wonderful executive ability. He had been warden of the prison at Jackson, Mich.

Mr. FREAR. That is your home State?

Mr. SLIGH. Yes; that is my home State.

Mr. FREAR. You had lived there all your life?

Mr. SLIGH. Yes; although I had never met Disque. In fact he was over there about nine months. After the luncheon Ledbetter said, "Colonel, tell these gentlemen what you told me about Jackson," and Col. Disque told us of the wonderful things he had accomplished at the Jackson prison; he said he had established the canning industry there, that the prison was bankrupt when he went there, and he had produced such a high grade product that it brought 10 or 15 per cent more in the market than any other canned goods, and that he established this twine industry and he had cultivated a large farm and he had produced a discipline that was superior among the inmates, etc.

Mr. FREAR. Just a minute; before we come to Ledbetter's statement in regard to him—did you know anything about Disque yourself?

Mr. SLIGH. No, sir; not then.

Mr. FREAR. Do you know anything about him now?

Mr. SLIGH. Yes; I know a great deal about him now.

Mr. FREAR. Do you know anything about the legislative investigation that was conducted in Michigan?

Mr. SLIGH. Yes; I have a copy of it.

Mr. FREAR. Then, there is no need of going into that.

Mr. SLIGH. Nearly all the statements that he made to me at that time were absolutely false.

Mr. FREAR. That is the statements made by Ledbetter?

Mr. SLIGH. Yes, sir; at that time I did not know anything of Disque's management there; he was over there about nine months, and of course, being a guest of Ledbetter's, I would not have been discourteous enough to accuse him of dishonesty at that time, but I immediately wired to two or three friends of mine to find out who Disque was and what he had done at Jackson.

Mr. FREAR. That is after this meeting in which Ledbetter told you about this and introduced you to him?

Mr. SLIGH. Yes, sir; one of the most prominent business men in Michigan—

Mr. FREAR. We will take this up afterwards; I wanted to find out whether or not you knew at that time, whether you knew about it then?

Mr. SLIGH. No, sir.

Mr. FREAR. I am interested in what you knew about Ledbetter.

Mr. SLIGH. This friend of mine that I wired to, wired back and said that he knew Disque better than the man who made him, and he had written several pages of a typewritten letter to the governor of Michigan asking him for a safe job, and that it was yellow on every page.

Mr. FREAR. That is, Disque had?

Mr. SLIGH. That Disque had, and that it was yellow on every page.

Mr. FREAR. Disque was a captain in the Regular Army in 1915?

Mr. SLIGH. Yes, sir.

Mr. FREAR. And he was then in the Quartermaster's Department?

Mr. SLIGH. Yes, sir.

Mr. FREAR. He resigned and was given this appointment by the Governor of Michigan and served there nine months?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Did he resign voluntarily, or was his resignation requested?

Mr. SLIGH. He resigned voluntarily.

Mr. FREAR. Then he went to Washington?

Mr. SLIGH. Then he went to Washington. Senator Townsend told me that Disque came to him and asked him to secure him a commission in the Army, and he wanted Townsend to get him reinstated according to his number.

Mr. FREAR. That is as a captain?

Mr. SLIGH. Yes. Townsend went to the department about it and they refused to do it, but eventually he did get a commission as lieutenant colonel and had been at that time detailed to go to France. This was in the latter part of October, and he had been detailed to go to France with Gen. Floy.

Mr. FREAR. He was here a few days ago.

Mr. SLIGH. He was in charge of the work, and any Regular Army man who had any spirit would have given his boots to go to France, but instead of that Col. Disque spent nights and days trying to get this appointment out on the Pacific coast, 7,000 miles from the firing line.

Mr. FREAR. What information do you have of that?

Mr. SLIGH. I know it, I was there at that time. He had never seen a modern mill, did not know a fir tree from a spruce; I don't know that he knew it from an apple tree; he had gone into the Army at 19 years of age, he had been there all of his life, and the only business experience he ever possessed was the nine months that he was warden of the Jackson prison.

Mr. FREAR. The report of the legislative committee is that the Secretary of War was before the subcommittee the other day and spoke in very eulogistic terms of Mr. Disque, and we have merely passed it by without any suggestion further until we get full information.

Mr. SLIGH. The Secretary of War had to do that to save his own reputation.

Mr. FREAR. He might have believed that.

Mr. SLIGH. I don't think so; if he had taken any pains to find out he must have known it was false.

Mr. FREAR. Who appointed Disque?

Mr. SLIGH. After this conference at Ledbetter's house—this was at the time we secured the resignation of Mr. Allen—on that same day, immediately before I left his house, Mr. Ledbetter came to me and asked me to recommend Col. Disque in place of Mr. Allen on the coast.

Mr. FREAR. What reason did he give, if any?

Mr. SLIGH. On account of his wonderful executive ability that he had demonstrated at Jackson prison.

Mr. FREAR. In Michigan?

Mr. SLIGH. Yes, sir. He had evidently impressed Ledbetter with the fact that he was a wonderful man. I said to Ledbetter—I had bought over \$200,000 worth of timber from him about two years

before, and when I came to Washington he had presumed to cultivate my acquaintance; I thought that it was done as a matter of courtesy, but it afterwards proved otherwise—I said, "Disque has no qualifications for that job at all." I said, "I am going to recommend the appointment of Russel Hawkins." Russel Hawkins had had 20 years' experience out there.

Mr. FREAR. He was in Portland?

Mr. SLIGH. He was in Washington at that time, and after sizing him up and getting recommendations from various large lumber men on the coast, all of whom recommended him highly, I recommended him to Col. Deeds; he was at the head of the division in which my work was being done.

Mr. FREAR. Deeds was from Ohio?

Mr. SLIGH. From Dayton, Ohio. He was my immediate superior officer. I told him I could not recommend him, and I did not; but three or four days afterwards—I have got the exact date here, but I can not recall it just now—Col. Disque came to me himself. He came on the pretense that he wanted to know how many troops it would require out there to preserve order, and it had been rumored he was going to be sent out in charge of the troops that were ordered on the coast, and he also made the request for my recommendation. I told him candidly I did not think he had the qualifications necessary for that job. We wanted one who knew the business; but he secured the appointment a few days afterwards.

Mr. FREAR. From whom—do you know?

Mr. SLIGH. Evidently from the Secretary of War, because he went out there; it might have come from Col. Squires; but he went out there on a preliminary trip. On November 8 they organized a spruce division, and he was designated as colonel and Maj. Leadbetter as liaison officer in charge at Washington, that was taking over my work I had been doing.

Mr. FREAR. Were you commissioned at that time?

Mr. SLIGH. Yes; on the 15th of August. I went there as a civilian, and volunteered, and paid my own expenses; I preferred to do that. Deeds came to me personally after this international conference; he and Col. Walden were exceedingly effusive of my work; they characterized it as wonderful. They said, "Sligh, you have done a wonderful piece of work." On the same afternoon Deeds came to me, to my office, and asked me to accept a commission as major. I said I would prefer to do it as a civilian. That was in July. The commission was dated August 15.

Mr. FREAR. You said Leadbetter became a commissioned officer some time in November—

Mr. SLIGH. I don't know what time he was commissioned, but the first time I saw him he was presumably attached to what was known as the Finance Division of this Signal Corps, but he apparently did not have very much to do except hanging around and waiting for a job; I could not see it if he had anything to do; they sent him out on jobs once in a while.

Mr. FREAR. Do you know anything about the amount of money that was on deposit with the Northwestern National Bank of Portland?

Mr. SLIGH. I knew nothing about it.

Mr. FREAR. Did you know it reached as high as \$10,000,000 at one time?

Mr. SLIGH. No, I was not in a position to be familiar with it; I did not make it my business to know that.

Mr. FREAR. Now, when was that; after Disque had gone to the coast?

Mr. SLIGH. Before Disque had gone to the coast, Mr. Leadbetter came to me, he says, "Sligh"——

Mr. FREAR. About what month was that?

Mr. SLIGH. This was in October, 1917, he said, "Sligh, have got an option to buy 4,100 acres of spruce land in the Siletz Basin, and he said "I want you to come in with me, and we will organize a company and take over Spaulding's two mills, one at Newberg and one at Salem." He said that Spaulding was in the hospital.

Mr. FREAR. Where is Newberg in reference to Toledo?

Mr. SLIGH. About 15 or 16 miles north of Salem, and Salem is the capital of the State.

Mr. FREAR. That is up near the central part of the State?

Mr. SLIGH. It is within 40 or 50 miles of Portland. He said: "Poor old Spaulding is in the hospital, and we can buy those two mills awful cheap and we will organize a company and make a lot of money out of it."

Mr. FREAR. He was then a major in the finance department?

Mr. SLIGH. Yes, sir; and he was in charge of the wood section, but I was making the contracts.

Mr. LEA. Who was this?

Mr. SLIGH. Major Leadbetter. I said, "No, I am not doing that kind of business; I have acquired a competency, I don't need the money, and I am trying to be of some service," and passed it off. He came in a few days later and said "I have sent for the blue prints and will have them in a few days."

Mr. FREAR. What was he referring to?

Mr. SLIGH. He was referring to buying Spaulding's tracts.

Mr. FREAR. The Siletz Basin is near Toledo?

Mr. SLIGH. It is southwest of Salem, and the timber in that region is tributary to Newberg and Salem. The basin extends over a territory east and west of there I should say probably 75 miles.

Mr. FREAR. And runs north how far?

Mr. SLIGH. I should think 40 or 50 miles wide. And east and west probably 75 miles; the whole of it is tributary to Salem.

Mr. FREAR. The reason for asking these questions a great deal of lumber operations subsequently occurred around that section.

Mr. SLIGH. I was in that region 9 or 10 years ago. I turned him down in the same way, tried to be courteous about it; he came to me the third time and I became so incensed——

Mr. FREAR. He came to you the third time in regard to this Spaulding proposition of those mills and the timber in the Siletz Basin.

Mr. SLIGH. I did not know whether it was a scheme of his to trap me or get hold of something cheap in which there would be a large profit, but I became very much incensed, and I told him I was not a grafter, that I was trying to be of service, and I would not touch it with a 10-foot pole, and he said, "Well, it won't cost you a cent."

Mr. FREAR. What was his proposition, in regard to these Spaulding mills in the basin?

Mr. SLIGH. His proposition was to organize a company, buy in the 4,100 acres, buy the mills owned by C. K. Spaulding & Co., of which Leadbetter and his father-in-law had 51 per cent interest, and that we would cut spruce and sell it to the Government.

Mr. FREAR. Did he give you any figures at which this could be purchased?

Mr. SLIGH. I don't think so; I did not give him an opportunity to.

Mr. FREAR. He knew you were a contracting officer on the part of the United States?

Mr. SLIGH. Yes, sir.

Mr. FREAR. And the contracts had to come through you?

Mr. SLIGH. Yes, sir.

Mr. FREAR. He came to you the third time?

Mr. SLIGH. Yes, sir; the third time I treated him rather brutally, and he never spoke of it afterwards.

Mr. FREAR. Did he go to any one else?

Mr. SLIGH. I don't know, but to my knowledge there was never anything consummated along that line.

Mr. FREAR. About what time was that?

Mr. SLIGH. That was in the latter part of October, I should say, in 1917; and Mr. Leadbetter, through his father-in-law, had large interests in this Crown Paper Co.

Mr. FREAR. Where is that, in Portland?

Mr. SLIGH. That is south of Portland; I have forgotten the name. there is a city there that has large interests, gets its power from the river; Leadbetter and his father-in-law had owned at one time a mill about a quarter of a mile from the Vancouver Barracks.

Mr. FREAR. That was in Washington, right across from Portland?

Mr. SLIGH. Yes, and the property upon which Col. Disque established this cutting up plant. Leadbetter said the old stuff was not worth anything except for junk.

Mr. FREAR. The old mill?

Mr. SLIGH. The old mill; it had been abandoned for 10 years, but as soon as Disque got in there, Leadbetter attempted to sell it: he offered it for \$150,000.

Mr. FREAR. Offered the plant?

Mr. SLIGH. Offered the plant, and held out to the man an inducement that he could make profitable contracts with Disque for his product. I have a letter explaining that.

Mr. FREAR. You have a letter of that kind?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Will you submit that in the record?

Mr. SLIGH. I will. I want to say something more in regard to the fir.

Mr. FREAR. All right; but let us keep track of the Vancouver proposition.

Mr. SLIGH. All right, sir.

Mr. FREAR. What became of that mill proposition: anything further?

Mr. SLIGH. He never succeeded in selling it: he did not find anybody glib enough to buy it.

Mr. FREAR. It was not turned over to the Government?

Mr. SLIGH. No; but he attempted to; it was a part of his profiteering. I characterized his efforts to me as nothing more or less than attempted bribing.

Mr. FREAR. Did you say that to him?

Mr. SLIGH. No; I did not say that to him.

Mr. FREAR. You refused to have anything to do with it?

Mr. SLIGH. I refused to have anything to do with it, and I was very brief with him, and almost brutal to him the last time. After Col. Disque came back and he secured this establishment of the spruce division, and Col. Deeds signed the order by which Leadbetter was—in fact he signed the entire order, in which Leadbetter became the liaison officer in Washington.

Mr. FREAR. What were his duties?

Mr. SLIGH. He was the connecting link between the spruce production division on the Pacific coast and the Washington officials.

Mr. FREAR. You were still in the employ of the Government?

Mr. SLIGH. I had exclusive charge of the work; I inaugurated the work I was doing at that time.

Mr. FREAR. Did you have any discussion with Col. Deeds as to why that was done?

Mr. SLIGH. I was never more surprised in my life when an order was laid on my desk on the 8th of November in which this change was made; it had only been a few weeks that I had been eulogized for the very efficient way in which I was doing things.

Mr. FREAR. Col. Deeds appointed Leadbetter absolutely without any conference with you?

Mr. SLIGH. Without any knowledge on my part; it was done so secretly; I knew nothing about it.

Mr. FREAR. Do you know anything about the influences that brought that about?

Mr. SLIGH. Yes, sir; the deal that Disque made with Samuel Gompers. I have a copy of the letter that Mr. Leadbetter wrote to Mr. Howe, of the Aircraft Board, in which he made the statement that Col. Disque's appointment was made by the Secretary of War after Disque and Leadbetter had had a conference with Samuel Gompers in which they had made satisfactory arrangements with him.

Mr. FREAR. With Gompers?

Mr. SLIGH. With Gompers. Mr. Gompers and Leadbetter and Disque went personally to the Secretary of War and had a conference in which the Secretary of War, Newton D. Baker, finally approved of the arrangement.

Mr. FREAR. Had you had any conference with Mr. Gompers?

Mr. SLIGH. No, no, sir; I never did.

Mr. FREAR. Do you know what the nature of the agreement was? That is, between Leadbetter and Gompers?

Mr. SLIGH. The only way I can arrive at what the satisfactory arrangement he made was, that inside of six weeks afterwards he issued an eight-hour day order for the Pacific Coast.

Mr. FREAR. You have that letter?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Will you file that letter or a copy?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Getting back to Leadbetter being appointed as liaison officer.

Mr. SLIGH. Col. Disque himself, when he came to me in regard to this question of troops, I said to him in a joking sort of way that he could not take troops out there unless Gompers approved of it, because it was quite a joke in Washington that nothing was done in the labor situation unless Gompers approved it. I said it in a joking way, but he said, "I have got Gompers's approval."

Mr. FREAR. Who said that?

Mr. SLIGH. Col. Disque; that was at the time he started out on his initial trip to the Pacific coast, in October; so there can be no question but what the satisfactory arrangements that were made with Gompers were in regard to establishing an eight-hour day.

Mr. FREAR. That is your understanding of why Leadbetter received this appointment as liaison officer?

Mr. SLIGH. Yes, sir.

Mr. FREAR. What occurred after that?

Mr. SLIGH. After that I immediately went to Col. Deeds and laid before him the copy of the order of Leadbetter being appointed to this office, and he said he didn't know anything about it, and I said, "Here is your signature on here," and he said, "I sign lots of papers that are prepared by somebody else that I do not know their contents." I said, "But this is pretty important. I would not think you would do that unless you knew what you were signing. He was my superior officer, but at the same time I thought that was the only thing he was superior in, and I had worked along there in a capacity as a civilian and we had been very free in our conversation together; this was about 5 o'clock at night, and he said, "I will look that up and let you know in the morning," and he rang for his secretary and the secretary came in and he said, "See that these papers are looked up and I will attend to that in the morning." In the morning I went in there again and he said, "It seems I appointed Leadbetter on this because Col. Disque requested it." I said, "Do you let somebody else run your division, or are you running it yourself?" He said, "You know how those things happen." I said, "That is a very discourteous way to treat me, and if you had told me I was embarrassing you in any way, I would have resigned; I have enough business to take my time, anyway."

Mr. FREAR. What was the effect of the appointment of Leadbetter in relation to the duties turned over to him?

Mr. SLIGH. It took from my division the making of contracts on spruce and fir.

Mr. FREAR. Leadbetter had made the proposition of taking over the tract belonging to the Spaulding Co. when you were a contracting officer, and the timber in the Siletz Basin?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Three times?

Mr. SLIGH. Yes, sir.

Mr. FREAR. After you refused to do it he received the appointment of making contracts?

Mr. SLIGH. Yes, sir. The contracts were initialed by the officer in charge of the wood section, and then they were taken to Col. Deeds for signature.

Mr. FREAR. You were eliminated thereafter from the making of contracts?

Mr. SLIGH. Yes, sir; absolutely, and he was substituted. I had the entire charge at that time of the contracts for all the propellers; I had charge of buying all the hardwood, mahogany, oak, and birch; all the woods used.

Mr. FREAR. Mahogany enters into the construction of propellers?

Mr. SLIGH. Yes, sir; the propellers of the high-grade machines were all made from mahogany. I had secured from the department an order that propellers for training machines might be made from birch or oak, but the high-grade machines used walnut or mahogany, and there was considerable work in regard to that.

Mr. FREAR. Were your duties afterwards limited to this work?

Mr. SLIGH. When I went to Col. Deeds and protested against this action, he said, "There is plenty of work for you both; you keep charge of the hardwood, propellers, all this veneer work, and work of that kind; there is plenty of work to keep both of you busy." I said, "I consider that the action you have taken here is a humiliation, and I won't consent to it at all." He said, "You come back in a day or two," and I went back, and he still urged it, and I told him at that time that the only consideration in which I would remain in the service was that I should be appointed to the vacant position, the position at that time vacant on the Air Craft Board, and he said, "Well, I will see what we can do about that," and that is the last I ever heard from him.

Mr. FREAR. Let me interrupt you here. I have a communication which comes from an entirely different source, in which it says, referring to the above "would amount to approximately \$300,000." Was that the amount named to you on that proposition from Leadbetter on the Spaulding property?

Mr. SLIGH. No.

Mr. FREAR. No amount named to you at that time?

Mr. SLIGH. No; it involved an investment of several hundred thousand dollars, but he assured me it would not cost me a cent.

Mr. FREAR. Was anything said about any influence possessed by you, anything like that, at the time?

Mr. SLEIGH. No; he knew that, of course; knew I was making contracts every day on behalf of the Government, and knew that all contracts were going through me, but the purchase of the two mills and all the property involved several hundred thousand dollars.

Mr. FREAR. Was anything said by him to you in regard to Messrs. Hawkins and Walden of the Air Craft Board being in a position to command a lot of capital?

Mr. SLIGH. No; he never got any encouragement from me whatever, and after the third visit he cut it out. Col. Deeds insisted that I remain in charge of the other work, and I refused to do it unless I got further recognition. I knew if I got on the Air Craft Board that my knowledge of the business would be useful, and I knew I could give some information to Squires and Admiral Taylor that might save the wreck out there.

Mr. FREAR. Did you discuss with Col. Deeds anything about Leadbetter's position and power when he would be given the authority to make contracts, or anything like that, and ask why it was taken away from you, or was it discussed?

Mr. SLIGH. No.

Mr. FREAR. The conversation was just as you have stated it.

Mr. SLIGH. Yes, sir. A short time after this conversation with Col. Deeds, Col. R. L. Montgomery, who was at the head of the Finance Division, and Maj. Currier, who was Deeds's assistant, came to my desk and spent one hour and a half urging me to remain on the job.

Mr. FREAR. You told them you were going to resign?

Mr. SLIGH. Yes; I told them I was going to resign; as a matter of fact I wrote Deeds a letter, wrote him two letters, and told him unless Leadbetter was eliminated I would ask to be relieved, and if that was not done by a certain time next week I would ask to be relieved, and it was not done, and I asked to be relieved from the work in that section, which he never answered, and I remained on the work necessarily until January 22, and then I resigned, of course. Col. Montgomery and Maj. Currier spent one hour and a half asking me to reconsider my intention to resign, and I told them I could not stay and maintain my self-respect and work with that gang any longer.

Mr. FREAR. Was there anything in addition to the appointment of Leadbetter in particular that was objectionable?

Mr. SLIGH. Simply the fact that he didn't know anything; he didn't know any more about lumber than a 16-year-old boy; he was absolutely incompetent for the place.

Mr. FREAR. I mean with Deeds; was there any difference between you and Deeds except in regard to the matter of Leadbetter?

Mr. SLIGH. No, sir.

Mr. FREAR. It was all because of your asking for the removal of Leadbetter and what he had done in the past, and what he would have done in the future?

Mr. SLIGH. Yes; before that time our relations had been cordial. Of course, I had recognized Col. Deeds's lack of executive ability.

Mr. FREAR. How was that brought to your attention?

Mr. SLIGH. It developed from the fact that there were some 12 sections, or departments, all presided over by a major, and they got into a hopeless tangle.

Mr. FREAR. That was in Washington?

Mr. SLIGH. That was in Washington. Col. Deeds was in command of that division, and they were in a hopeless tangle; he sent for Charles T. Bush, of Detroit, Mich., a capable man, and Bush came down there and tried to unscramble the eggs, and he had an office in one corner of a very large room with Col. Horner and myself; Mr. Bush had a desk there. One day a matter of procedure came up, and I went to Mr. Bush and told him I understood he was here to establish some order in this department, and I had something I wanted to do, and I would like to have his approval of it. He said, "Well, you do it in your own way. When I came here I was told there was one department I would not have any work to do in, and you do it in your own way," and he got that information from Col. Deeds.

Mr. FREAR. What were the other 11 departments? Briefly, can you suggest just what they were, not in detail?

Mr. SLIGH. There was a purchasing department, one in charge of linens—I can not remember them all offhand—one in charge of guns.

Mr. FREAR. Guns used on aircraft?

Mr. SLIGH. Yes; in regard to instruments.

Mr. FREAR. The suggestion was that these various departments needed some one to reorganize them, and they brought this man from Detroit for that purpose.

Mr. SLIGH. Mr. Bush; yes.

Mr. FREAR. About what time was that, Major?

Mr. SLIGH. Bush was there in October.

Mr. FREAR. What are his initials?

Mr. SLIGH. Charles T. Bush.

Mr. FREAR. From Detroit, Mich.?

Mr. SLIGH. From Detroit, Mich. He is a member of the firm of Strellinger & Sons in Detroit.

Mr. FREAR. What is his business?

Mr. SLIGH. That is a large wholesale house there, I think, in mill supplies.

Mr. FREAR. He was called in there to reorganize those departments?

Mr. SLIGH. Yes; as an expert.

Mr. FREAR. Because he had had experience in that work?

Mr. SLIGH. Yes, sir; and he made that statement, that there was one division that was all right, and he told me, "You go ahead and do it in your own way."

Mr. FREAR. Getting back to the question of your resignation, when you discussed it with Col. Montgomery and Maj. Currier.

Mr. SLIGH. They spent one hour and a half there, and after that discussion I told them I could not remain in the service; I could not maintain my self-respect and continue my work in that department, and I refused to consider it. I did, however, continue along there until the work was cleaned up.

Mr. FREAR. Until what time?

Mr. SLIGH. I resigned the 19th of January, 1918. In the meantime there had been all sorts of rumors circulated in the division in regard to Sligh's incompetency and dishonesty; everything in the category had been ascribed to me. I asked Col. Deeds to prefer charges against me, but I never got any satisfaction from him. I told Col. Seoni if charges were not preferred against me I would prefer them against Deeds. He was a lieutenant colonel, Seoni, one of Deeds's assistants. I could not get any reason ascribed for being superseded, so in December I wrote to The Adjutant General's office demanding a court of inquiry, and after two or three weeks the answer came back that Maj. Sligh was superseded because the department wanted the services of a younger and more active man, and I told them that that was not satisfactory; that there had been all sorts of rumors circulated in regard to my integrity, and as soon as the official statement was made that my integrity was not in question I would resign and get out of it; I was tired of the broils; and Col. Montgomery changed that and brought in a statement that Maj. Sligh was relieved because the department wanted the services of a younger and more active man, but there was no question about his incompetency or dishonesty.

Mr. FREAR. What was your age, Major?

Mr. SLIGH. I went in as 52.

Mr. FREAR. I asked the same question of Gen. Goethals the other day, when he said he had been retired because of his age; he said he was 59; I asked the Secretary of War why a man of Gen. Goethals's ability was not placed in the place of Col. Deeds; he was called by the Secretary of War in December of 1918, and took charge of the Quartermaster Division of the Army after he had been out on account of the age limit.

Mr. SLIGH. I am past 60, but I stalled a little to keep in the service. As a matter of fact, after I left Maj. Leadbetter was put in charge of the spruce and firs; Lieut. Ryerson was put in charge of the propellers. They brought a man—Wittcliffe—from Louisville; Mr. Williams from New York City, in charge of the mahogany, and installed another lieutenant in charge of the veneer work. They had four men in charge of part of the work I had been doing, so they evidently did not want a younger and more active man. In regard to Col. Disque, I would like to make a statement.

Mr. FREAR. Before we leave that other proposition; what reforms were put into practice, so far as you know, after you retired from the service up there, by Leadbetter, or either of the three men who were appointed to take charge of the diutes you performed alone?

Mr. SLIGH. None. The recommendations I made to Coffin, on June 24, 1917, were all of them operated under. I made those five recommendations; one recommendation in regard to cutting lumber to dimension, which I made in June, which I never got authority to put into operation, but after Disque had been there for several months, he established that.

Mr. FREAR. What was that?

Mr. SLIGH. Cutting lumber in dimensions.

Mr. FREAR. Cutting it to dimension?

Mr. SLIGH. Cutting it to dimensions.

Mr. FREAR. What was the second?

Mr. SLIGH. In eliminating the brokers in the United States for all of the lumber, and operating everything through the Signal Corps.

Mr. FREAR. Allocating to the various governments?

Mr. SLIGH. Yes, sir.

Mr. FREAR. They followed out your recommendations, did they?

Mr. SLIGH. Every one of them. Every one of them were adopted and were worked to, but the dimensions was the only one I did not have an opportunity to put into effect exclusively, and they did it, and it worked very effectively. In regard to Leadbetter and the contract with the fir emergency committee, through Long & Bloedel, at a price of \$55: On that price I said, "Now, gentlemen, we will give you this contract on condition that you execute this inside of 90 days.

Mr. FREAR. That was for the foreign governments?

Mr. SLIGH. England, France, and the United States; Italy had contracted for itself. I said, "We will give you this contract on condition that you deliver this lumber inside of 90 days." I said, "This is an emergency case; we are using it as a substitute for spruce. We will pay you \$55 if you will do that," and they said, "That is all right; we will do it."

Mr. FREAR. That was their own figures.

Mr. SLIGH. Yes. Mr. Long has one mill that was cutting 500,000 feet, and Mr. Bloedel has a mill cutting 300,000.

Mr. FREAR. Where is Mr. Bloedel's mill?

Mr. SLIGH. Benningham, and Long's at Everett, and of course the Weyerhaeusers have other mills. Those two men, themselves, could have executed that contract if they had not taken it to anybody else. As a matter of fact, when they got home, while both of them were exceedingly able, wealthy, and competent business men they had made a price that was pretty low, and they found other manufacturers opposed to cutting such strictly high-grade lumber at that price, and in three weeks they did not ship a foot. I asked what

was the trouble, and they said they wanted a change in the specification. They said they wanted more pitch-pockets allowed.

Mr. FREAR. What is that?

Mr. SLIGH. A defect, which would destroy the strength of the wood.

I wired back to Mr. Bloedel that we didn't want any modification of the specifications that would lessen the quality, that would make the quality less effective; that if the price was not high enough, that on the next contract we would talk price to them. They immediately found out if they did not execute that contract we would commandeer it and go ahead, and then they commenced shipping. At the time they left off in January, several months later, they had executed about one-quarter of the contract, long after the 90 days expired, and only one-quarter of it had been executed, and almost immediately Leadbetter changed it from \$55 to \$65.

Mr. FREAR. They voided the contract by getting your resignation?

Mr. SLIGH. They voided the contract by getting my scalp, and the price increased from \$55 to \$65, when the contract had been one-quarter executed.

Mr. FREAR. That was fir or spruce?

Mr. SLIGH. That was aircraft fir. That referred to the specific order of 8,000,000 feet for England, 3,000,000 for the United States, and four and one-half million for France.

Mr. FREAR. And they furnished it for \$65 a thousand, so far as you learned?

Mr. SLIGH. Yes, sir; I never learned of their getting more than that; I don't know whether they did or not; I lost track of it.

As far as Col. Disque is concerned, his story of what he had done at Jackson Prison was a pure fabrication, and I don't like to use that short and ugly word, but it is the only word that is fit to characterize his character; he not only lied repeatedly, but is a faker of the first water.

Mr. FREAR. What do you mean by "faker"?

Mr. SLIGH. A man that claims and takes credit to himself for what other people accomplish. There was some good work done at Jackson Prison by Nate Simpson, the former warden, a very capable man, whom Gov. Ferris, a political opponent, had asked to remain on the job, and tried to get the legislature of Michigan to appropriate enough money to pay him a salary of \$10,000, because he was such a useful and good man, but the legislature would not and Disque was appointed to that position, and Disque assumed in this story credit for doing all the things that Nate Simpson had done four or five years before.

Mr. FREAR. Do you know what the legislature found, that parties were contracting with the State when they were in the position of allowing the contract for the furnishing of supplies.

Mr. SLIGH. Yes. I will say, however, that recently, within 10 days there has been a report made to the governor that they have not found any stealings. The first report was made by the accountants from Detroit, and which intimated there was dishonesty, but a recent report made in the last 10 days stated there was not.

Mr. FREAR. I am speaking of the legislative report wherein they said that the parties who were contracting with the State when they were in the position of allowing the contracts through the warden. That finding is there.

Mr. SLIGH. Yes, Mr. Fernsdorff was one of the men; the committee has made another report in which they again exonerated everybody from dishonesty.

Mr. FREAR. That is a question of practice in the State.

Mr. SLIGH. Yes, sir.

Mr. FREAR. What about Mr. Disque's assistant, at Portland?

Mr. SLIGH. Which one?

Mr. FREAR. His general manager.

Mr. SLIGH. Hitchcock, you mean?

Mr. FREAR. Heymann.

Mr. SLIGH. I am glad you asked that question. Mr. Heymann was warden of Jackson State Prison, and when I was informed that this letter had been written by Disque to the governor of Michigan. I wired back immediately and asked Gen. Fred Greene, who was responsible for Gov. Sleeper's nomination, to get that letter or a copy of it for me, and he said the letter had been removed from the governor's files, and given to Mr. Heymann, who was shortly after that appointed a major by Disque.

Mr. FREAR. Who was in Portland under him, at the Vancouver Barracks?

Mr. SLIGH. Yes, sir.

Mr. FREAR. To whom do you understand that Disque owed his appointment?

Mr. SLIGH. That has been a mooted question.

Mr. FREAR. I mean in Michigan.

Mr. SLIGH. Gov. Ferris tried to find out for me.

Mr. FREAR. Who was on the board at that time?

Mr. SLIGH. Heymann, Fernsdorff, and Werneke. Mr. Werneke, who was on the board at that time, and he left the board five or six weeks after Disque was appointed warden; in a report by Col. Disque—in a report made recently—and this is where he premeditatedly and with intention misrepresented facts.

Mr. FREAR. As to what?

Mr. SLIGH. In regard to his work out in Portland, and on the coast and assumes credit for things he is not entitled to.

Mr. FREAR. Briefly, what is that?

Mr. SLIGH. He did it repeatedly in divisions all over the United States in this report. In the first place, he gives the impression that he assumed control in October. His appointment was not made until the 8th of November, and he did not get out there until after the middle of November, and he had absolutely nothing to do with matters until after the 1st of December. He claims in this statement there was an immediate increase—under my administration we shipped in October 3,500,000 feet of spruce, No. 1 specifications in November we shipped 4,100,000 feet; that was done under my administration, and while Russel Hawkins was in charge, and for which Col. Deeds is claiming credit. In December, he shipped two and a half million. January 2,000,000, February 2,000,000.

Mr. FREAR. You said it was due to the labor situation, in which they refused to furnish any troops for the protection out there.

Mr. SLIGH. If they had furnished troops, the Secretary of War. In August, we could just as well have had six to eight million a month under the management as being conducted, because when I was in

charge there—because during the last two months I was in charge we did produce nearly 8,000,000 feet under bad conditions, and by volunteer labor.

Mr. FREAR. It is half past 12, and I would like to discuss with you immediately after the lunch hour something in regard to the rioting that was done out there, and also in regard to some of the railways that were built out there. We will adjourn until 2 o'clock.

(Whereupon the further hearing by the commission was adjourned until 2 o'clock p. m. of the same day, Monday, August 11, 1919.)

2 O'CLOCK P. M. AUGUST 11, 1919.

The committee met pursuant to recess.

Present, same as before.

Maj. Charles R. Sligh resumed the stand and further testified as follows:

Mr. FREAR. If you have any letters you offered to introduce in evidence we will put them in.

Mr. SLIGH. There is a copy commandeering.

Mr. FREAR. This is the order when the Secretary gave the order for commandeering the spruce.

Mr. SLIGH. Yes.

Mr. FREAR. And the others will be placed in the record.

Mr. SLIGH. There are several items here I will leave copies.

Mr. FREAR. What are those?

Mr. SLIGH. These are copies of the telegram sent to me by Col. Disque. And the other—

Mr. FREAR. This is from Norman McClave. From where?

Mr. SLIGH. Grand Rapids, Mich. I wired to Michigan to find out who he was and he says who he is.

Mr. FREAR. That is the one you asked about.

Mr. SLIGH. I referred to that one.

Mr. FREAR. Mark these. You may introduce them right in the record, I think, that is the way they were; they were very short, all of them.

Mr. SLIGH. Those are copies of letters from Mr. Roth out in Oregon; I thought you would like copies.

Mr. FREAR. The first is the order of the Secretary of War, commandeering the spruce.

(Said letter is as follows):

[Copy of telegram.]

(In pencil: "Commandeered.")

SEPTEMBER 5, 1917.

Under the provision of section 120 of the act of Congress approved June 3, 1916 (39 Stat., 166), entitled "An act making further and more effective provision for the national defense, and for other purposes," you are hereby ordered to proceed with all possible haste in the production of airplane spruce on the order placed with your company by the Equipment Division of the Signal Corps. In filling this order, you are further required to give preference thereto over all other orders without regard to the order or date of contracting therefor, provided that this order shall not operate to interfere with necessary Navy work for the Government of the United States.

By direction of the President.

NEWTON D. BAKER,
Secretary of War.

O. K. S. D. W.

O. K. H. E. Coffin.

This is a copy of order used in commandeering spruce and before being signed by the Secretary of War was approved by the following:

R. S. Lovett, president U. P. R. R.

S. D. W. (Waldon), colonel, Equipment Division, Signal Corps.

G. O. S. (Squires), major general, Signal Corps.

H. E. Coffin, chairman Aircraft Production Board.

The document was prepared by the attorney of Aircraft Production Board at my request.

CHARLES R. SLIGH.

Mr. FREAR. The second is a telegram from Norman McClave to Maj. Sligh, dated December 12, 1917.

(Said telegram is as follows:)

[Copy of telegram from Norman McClave to Maj. Charles R. Sligh.]

GRAND RAPIDS, MICH., *December 12, 1917.*

Maj. CHARLES R. SLIGH,

2649 Woodley Road, Washington, D. C.

Saw Brown to-night, first chance. He knows Disque better than the fellow who made him. Says he has no more business head than a child. Was captain of Cavalry; extremely selfish; not liked in Army. Wernicke found him and sponsored him says governor has letter from him several typewritten pages in effort to get safe job, which shows Disque yellow on every page; says prison over million in debt and investigation would show Disque incompetent; not long enough at prison, however, to do great harm. He has promised to write you to-morrow, and I told him to go thoroughly into details (he does not believe Thompson and Disque connected). Sit tight until you get Brown letter and more information. Send me a copy of his letter.

NORMAN MCCLAVE

Mr. FREAR. The third is a letter from St. Johns Lumber Co. addressed to J. C. Roth, representative of the car service section, United States Railroad Administration, dated June 14, 1918, and a reply—is it?

Mr. SLIGH. Yes.

Mr. FREAR. From J. C. Roth, under date of June 14, 1918.

(Which said letters are as follows:)

UNITED STATES RAILROAD ADMINISTRATION.

DIVISION OF TRANSPORTATION.

Portland, Oreg., June 14, 1918

ST. JOHNS LUMBER CO.,

St. Johns, Oreg.

GENTLEMEN: Referring to conversation with Mr. Ayer to-day, I have been directed by Col. Brice P. Disque to withhold the placement of all cars from your mill until further notice.

Yours, truly,

J. C. ROTH

JUNE 14, 1918

Mr. J. C. ROTH,

Representative Car Service Section,

United States Railroad Administration,

Portland, Oreg.

DEAR SIR: We beg to acknowledge receipt of your favor of this date, the 14th instant, in which you state that you have been instructed by Col. Disque to see that we are furnished with no cars for loading lumber.

We regret this action on the part of Col. Disque, as it will necessitate the shutting down of our plant and prevent us from doing our share toward supplying material for our Government in ship construction, aeroplane stock, and for railroad work.

For the first four months of this year 42 per cent of our cut was for Government requirements, so that the closing down of our mill will be felt to a certain extent. As far as the prompt loading of cars and of loading cars to maximum capacity is concerned, we believe you will agree with us that we have done as well as any mill in your district.

As we suggested to you a few days ago, we would be pleased to meet, through you, Col. Disque, to discuss any grievances that he had with us. We also told you that we were very loath to be forced to close down, on account of our anxiety to do our bit.

As you were unable to get Col. Disque to rescind his order, is there not some one higher in authority that you can place this matter before, so that you may be able to get us cars so we can resume operation? If there is, we should be pleased to have you make every effort in this line, as we believe it is only your patriotic duty to do so.

Yours, very truly,

ST. JOHNS LUMBER CO.

Mr. FREAR. What is this in reference to, Mr. Sligh?

Mr. SLIGH. That is in reference to—Disque arbitrarily cut off his supply of cars and made him shut up his sawmill because he could not make him do what he wanted about it. That is his complaint about it.

Mr. FREAR. This is a complaint from St. Johns?

Mr. SLIGH. Yes.

Mr. FREAR. The next is a telegram.

Mr. SLIGH. From the American Export Lumber Co.

Mr. FREAR. Addressed to Charles R. Sligh, under date of January 3, 1918, and this telegram is from Seattle, Wash.

Mr. SLIGH. Yes.

Mr. FREAR. Seattle, Wash. What is this in relation to?

Mr. SLIGH. That is in relation to the general condition of affairs out there.

Mr. FREAR. This had better be inserted in the record.

(Which said telegram is as follows:)

SEATTLE, WASH., January 3, 1918.

CHARLES R. SLIGH,

2649 Woodley Road, Washington, D. C.:

Careful canvas entire coast district shows not over two million feet spruce shipments possible each month, January to April, inclusive, and this by camps and mills operating on their own plans and management much larger production by other camps and mills would now be possible had experienced Government supervision and assistance been furnished. When you or anyone else think that an organization of inexperienced Army officers who never saw spruce trees before can get results as compared with experienced Pacific coast operators you are mistaken. How can you expect increased spruce production and cooperation of mills and loggers when you allow Disque to offer through press bonus for inferior split spruce over superior sawn spruce? He has only disrupted entire spruce situation for camps and mills by allowing large timber owners to induce him to announce through press exorbitant increase spruce stumpage values.

That man Leadbetter in Washington has, we understand, succeeded in carrying out his scheme for Government to install useless cutting-up plant near his old saw-mill property at Vancouver, Wash., which has been idle for 10 years; he is now offering his mill for sale at \$150,000, five times its value, claiming its wonderful advantage by its close proximity to the new Government cutting-up plant and offering large Government lumber contracts as an inducement to buyer. You or some other successful and experienced operator should personally investigate this spruce situation and put it under safe, sane policy with good management. Increased spruce production is possible only by increased log production, and this by experience and proper management.

AMERICAN EXPORT LUMBER CO.

Mr. FREAR. The next is signed by John L. Alcott, to Maj. Charles R. Sligh, under date of December 28, 1917; and what is it regarding?

Mr. SLIGH. Brokers' contracts.

Mr. FREAR. Brokers' contracts?

Mr. SLIGH. Yes. Those two refer to the same thing practically.

Mr. FREAR. The same is true of another letter from John L. Alcock & Co., or Alcott; which is it?

Mr. SLIGH. Alcott, A-l-c-o-t-t.

Mr. FREAR. Alcott.

Mr. SLIGH. Of Baltimore.

Mr. FREAR. Of Baltimore, of August 24, 1917. That is one you referred to?

Mr. SLIGH. Yes.

(Which said letter of December 28, 1917, is as follows:)

BALTIMORE, Md., December 28, 1917.

Maj. CHARLES R. SLIGH.

Chief Signal Officer of the Army, Washington, D. C.

DEAR SIR: We received a telephone call from Mr. Edward Brown, who is engaged in the walnut business in Missouri. We knew Mr. Brown many years ago, and bought from him considerable quantities of black walnut logs and lumber.

Mr. Brown tells us that he is visiting you, with a view to undertaking some contracts for walnut, and beg to say when we were dealing with Mr. Brown we found him reliable and trustworthy, and got from him a very good grade of walnut logs.

We do not know what position Mr. Brown is in to furnish manufactured lumber, but at his request are glad to write you of our acquaintance and experience with him.

We take this opportunity of expressing our appreciation of the thorough and business manner in which you worked the difficult problems of the spruce supply, and also the adjustment of outstanding contracts.

(Pencil memorandum inserted here as follows:)

["Made by millmen with broker and which I adjusted on basis of 60 per cent."]

We appreciate very much your attention to the matters relating to our interests in this administration, and wishing you the compliments of the season, trust that you may have health and strength for the task which comes before you in the present needs of our country.

Yours, very truly,

JOHN L. ALCOCK.

(The letter of August 24, 1917, is as follows:)

BALTIMORE, Md., August 24, 1917.

CHARLES R. SLIGH, Esq.,

Washington, D. C.

DEAR SIR: We beg to confirm telephone conversation with you yesterday, and as we did not hear from you by telegram presume you did not conclude the conference relating to future policy regarding aeroplane spruce.

We have thought a great deal over your suggestion that the mills now holding contracts for export orders be allowed to furnish 60 per cent of the unfilled quantity, to be of the Government grade and price.

We are inclined to support your idea this 60 per cent will go as far as the total quantity of "G" list grade.

In any case it is a very fair proposition for the adjustment of present conditions, and will allow the foreign buyers a big proportion of the stock manufactured in the immediate future.

We hope if this policy is adopted instructions will be sent to the mills to work out these planks immediately, and thus clear the way for new business under the manner in which your joint conference may see fit to adopt.

May we again assure you that we shall be very glad indeed to cooperate and join with you in bringing about the ultimate aim of the Aircraft Production Board, and will be glad to respond at any time that we can be of service.

Yours, very truly,

JOHN L. ALCOCK & CO.

Mr. FREAR. The next is a letter from Charles R. Sligh—

Mr. SLIGH. To you personally.

Mr. FREAR. August 9.

Mr. SLIGH. In relation to National Defense report that I referred to this morning.

Mr. FREAR. What is this?

Mr. SLIGH. The affidavit of Edward L. Wallace.

Mr. FREAR. What is it in relation to?

Mr. SLIGH. In relation to me personally—no; it is in regard to Howard E. Coffin's address.

Mr. FREAR. Is it important?

Mr. SLIGH. Yes; I think so.

Mr. FREAR. A copy of an affidavit signed Edward L. Wallace, dated December 10, 1917.

Mr. SLIGH. Regarding the address made by Howard E. Coffin.
(Which said letter and affidavit are as follows:)

GRAND RAPIDS, MICH., August 9, 1919.

HON. JAMES A. FREAR,
Chairman Select Committee,
Washington, D. C.

DEAR SIR: I wish to briefly give you a memorandum regarding some of my services at Washington.

Would state that in the first report of the Council of National Defense on page 18 you will find the following regarding the management of the spruce section. This was written in August and published about the 1st of September, 1917, and it says:

"A man of experience in woodworking operations, who very quickly succeeded in securing new cutting specifications that produced much larger percentage of aircraft wood from the log, who eliminated the waste, purchased direct from the mills instead of through brokers, and reduced the cost to the Government about one-half"—

My name is not mentioned, but this refers to my work and was consummated while Gen. Disque was still warden at Jackson Prison and before he had reentered the Army.

You will also find in the official records of the Aircraft Production Board of September, —, when I appeared before the board on their invitation, and explained to them the spruce situation, that I was very highly commended by Gen. Squires, who made the statement that my explanation of the matter was the first intelligent statement regarding the spruce situation that he had heard, and he moved that the thanks of the board be extended to Maj. Sligh, and that his remarks be made a part of the minutes of the meeting.

I was personally commended on several different occasions by Mr. H. E. Coffin, by Col. Deeds, Col. Waldron, Gen. Saltzman, and various members of the foreign missions, representatives of England, France, and Italy.

I was also, on September —, 1917, invited before the board to explain to Sir Joseph F. Lavell, Canadian representative in charge of aircraft production, our method, and which he requested me to present to him in writing, which I did, and I was afterwards informed by a representative sent to Washington by him that they had adopted the plan that I had inaugurated for our own use.

Yours, very respectfully,

CHAS. R. SLIGH.

DECEMBER 10, 1917.

DISTRICT OF COLUMBIA, §§:

Edward L. Wallace, being first duly sworn, on oath, deposes and says that he is a citizen of the United States and a resident of the District of Columbia.

That on or about September 12, 1917, he was in the employ of one Rexford L. Holmes, a public stenographer in the city of Washington; that in the course of his duties he was directed by the said Rexford L. Holmes to visit the rooms of the Old Colony Club, Raleigh Hotel, for the purpose of reporting in stenographic notes a meeting of the board of directors of the Aircraft Manufacturers Association; that in accordance with the said directions he reported at the said rooms of the Old Colony Club for the purpose aforesaid; that in the course of the said meeting one Howard E. Coffin made an address in which the following facts were in effect brought out:

Mr. Coffin at first made an address pertaining, among other things, to the general existing conditions of aircraft manufacture, during the course of which the matter of the production of spruce lumber for aircraft manufacture and the Government's commandeering of the same was brought up, and Mr. Coffin voluntarily made the

statement that the responsibility for the state and manner in which the production of spruce lumber for aircraft manufacture was being handled at that time was vested in one Charles R. Sligh, who, he stated, had accomplished wonderful achievements in the way of transforming the production of spruce lumber for aircraft purposes from a state of absolute chaos and uncertainty to an orderly condition, from which the very best results could be expected. The tenor of his remarks were to the effect that the said Charles R. Sligh was a very capable, aggressive, and efficient man in this line.

EDWARD L. WALLACE.

Subscribed and sworn to before me this ——— day of December, 1917.

Notary Public, D. C.

Mr. SLIGH. That is from Weatherwax of Aberdeen, Wash., regarding the specifications.

Mr. FREAR. What relation does that have?

Mr. SLIGH. That is indorsement of the specifications. I don't know but what you would——

Mr. FREAR. I don't know whether we had better introduce all these into the record. We might mark them as exhibits, though.

Mr. SLIGH. All right.

Mr. FREAR. I think some of these would be important, but it might take too much space.

Mr. SLIGH. Yes.

Mr. FREAR. We will take these, then.

Mr. SLIGH. They are all copies.

Mr. FREAR. Is there anything of special importance?

Mr. SLIGH. There is a letter from Col. Disque; a copy of one to Leadbetter.

Mr. FREAR. What is it all in reference to?

Mr. SLIGH. I think it will be interesting for you to go through them you will get information there when you get it there.

Mr. FREAR. What we will do is just to mark them——

Mr. SLIGH. I don't think it is necessary to put these into the record

Mr. FREAR. No.

Mr. SLIGH. It will give you information that will be necessary in the coast.

Mr. FREAR. We will hold these. I think that is true of the last one or two there.

Mr. SLIGH. This is a telegram from Leadbetter.

Mr. FREAR. How did you get this; how did they come?

Mr. SLIGH. I will tell you, I can not tell you—they are authentic though. I can substantiate them.

Mr. FREAR. They came to your hand so that you got either copies——

Mr. SLIGH. I know they are right.

Mr. FREAR. Copies of telegrams.

Mr. SLIGH. All right. In my testimony this afternoon I want to refer to several claims that Col. Disque makes in regard to the quality.

Mr. FREAR. The quality?

Mr. SLIGH. The quality of spruce that was shipped.

Mr. FREAR. By him?

Mr. SLIGH. Yes.

Mr. FREAR. These papers you will leave with me, so I can take them out there?

Mr. SLIGH. Yes.

Mr. FREAR. And look them over at our leisure?

Mr. SLIGH. Yes.

Mr. FREAR. When we adjourned at lunch, as I understand, you suggested that there were some other matters that you wished to call to the attention of the committee.

Mr. SLIGH. Yes; and I was discussing at that time the introduction by Col. Disque himself of a report that was recently——

Mr. FREAR. Which report?

Mr. SLIGH. Col. Stearns' report.

Mr. FREAR. On what?

Mr. SLIGH. On the operations of the Spruce Production Division. It has been made quite recently.

Mr. FREAR. Of what date, approximately?

Mr. SLIGH. Why, Mr. Scudder furnished me with a copy. You must have it here in your records.

Mr. FREAR. Col. Stearns?

Mr. SLIGH. Yes; Lieut. Col. Stearns. He was an assistant——

Mr. FREAR. Oh, yes; he is out there now in charge?

Mr. SLIGH. Yes; and he has written several pages.

Mr. FREAR. Yes; I understand.

Mr. SLIGH. Purporting to be a history of their operations.

Mr. FREAR. Yes, sir.

Mr. SLIGH. And there was an introduction of several pages, about 14 or 15 pages of Col. Disque, and these are claims which Col. Disque gave me and this morning which I stated were absolutely false. I have stated—I think I left off where he claims there had been an immediate increase.

Mr. FREAR. Go right on.

Mr. SLIGH. As a matter of fact, Col. Disque was appointed November 8, but he did not get out there until the middle of the month, and he had absolutely nothing to do with the operations practically until after the 1st of December; and during October and November operations were under the direction of Mr. Russell Hawkins, who had been appointed by me with the concurrence of Col. Deeds.

Mr. LEA. 1917?

Mr. SLIGH. 1917; that the production for September had only been about 2,000,000 feet; for October, 3,554,000 feet, of airplane spruce; for November it was 4,100,000 feet. For December practically—Col. Disque's operations began about the 1st of December, because he was busy for the first two or three weeks, trying to get organized. And he states in this introduction, that under his administration there was an immediate increase. As a matter of fact, for the month of December it decreased about two and one-half million feet. It was only 2,000,000 feet in January, and only 2,000,000 feet in February.

Mr. FREAR. Let me ask what district did this comprise?

Mr. SLIGH. Oh, that is the entire coast.

Mr. FREAR. The entire coast?

Mr. SLIGH. Yes.

Mr. FREAR. That will take Washington and Oregon?

Mr. SLIGH. Washington and Oregon; all the territory was under his—all the decrease you can readily confirm by the records at Washington.

Mr. FREAR. Or the spruce production headquarters at Portland?

Mr. SLIGH. At Portland.

Mr. FREAR. The reason I say that—

Mr. SLIGH. The reports were made at Washington, copies of which I saw after I was working—

Mr. FREAR. All the contracts and all the other papers were turned over to the Spruce Production Corporation at Portland, as I understand, and there are no originals now in Washington.

Mr. SLIGH. Well, weren't the records of the wood section in Washington?

Mr. FREAR. I think they have all been turned over—

Mr. SLIGH. I turned all I had over to Maj. Leadbetter.

Mr. FREAR. I think they have all been forwarded out there. At least, we can find no originals, and I sent for the contracts and I was advised they were at Portland.

Mr. SLIGH. His claim that there was an immediate increase is absolutely false. He also claims that there was no increase on account of soldier pay. Merrill Ring will testify, if you ask him to, that work done through Col. Disque's department in building the railroads was exorbitant and cost several times what it should cost.

Mr. FREAR. Merrill Ring & Co.; where are they?

Mr. SLIGH. They are large contractors out there, with headquarters in Seattle; they are one of the largest out there.

Mr. FREAR. Have they advised you to that effect?

Mr. SLIGH. I had a letter from them. That is the only name that comes to my mind at this minute, but you can get ample evidence of that from others.

He claims on page 6 that he initiated the rived spruce. Rived spruce is as old as the hills. Abraham Lincoln rived spruce. They were riving spruce before I was put in charge there, and rived spruce was being sold at that time for \$250 a thousand.

Mr. FREAR. Yes.

Mr. SLIGH. And rived spruce, if it is cut properly, was worth that. But Col. Disque claims in this article that he produced 10,000,000 feet which was used before other spruce was available.

Mr. FREAR. Yes.

Mr. SLIGH. Now, as a matter of fact, he did not produce during January and February—December, January, February, and March his production was only a trifle for those four months, including rived spruce and other spruce; it was only about 10,000,000 feet. It is an absolute misrepresentation.

He claims also on page 6 that that rived spruce only cost him \$105 a thousand. And you will find plenty of men out there that will testify to you it cost a \$1,000 or more per thousand. I saw myself personally at the barracks in Vancouver—

Mr. FREAR. That is, under the riving process?

Mr. SLIGH. Yes, sir; under the riving process. I saw on the barracks many carloads of this rived stock, and it was absolutely worthless.

Mr. FREAR. Why?

Mr. SLIGH. I visited the barracks in connection with—in company with Mr. C. E. Dent, of Dent & Russell, and there was carload after carload of this rived spruce shipped in that was worthless without being resawed, and it was testified to it was absolutely worth-

Mr. FREAR. What is that due to, riving or cutting it?

Mr. SLIGH. Riving is only valuable where it is an absolutely straight-grained log.

Mr. FREAR. Yes.

Mr. SLIGH. If a log is straight grained it will split more easily. And in riving and then sawing the lumber you get a character of lumber that is absolutely straight grained. In taking a spruce log and sawing on a mill you are liable to get spiraled or twisted grain or something of that sort.

Mr. FREAR. What you mean to say is that they do not take straight grained—

Mr. SLIGH. They did not. They cut anything that was a spruce tree, was cut and rived.

Mr. FREAR. I see.

Mr. SLIGH. When Mr. Dent and I were looking at that, he said, "Sligh, what will that produce?" I said, "I think you can get about one-third out of that that will be good." He said, "It won't produce 25 per cent."

Mr. FREAR. You mean the rived cants?

Mr. SLIGH. The rived cants on the barracks out there at Vancouver, there were at least 75 per cent, in his opinion, that were worthless; in my opinion there were over 66 $\frac{2}{3}$ per cent.

He also claims, on page 11, the superselected spruce and fir logging he shipped was 143,000,000 feet and 143,000,000 feet would have constructed 178,000 airplanes. That super—what he calls—this is a quotation from his report—that superselect spruce and fir—

Mr. FREAR. Where does he make that claim?

Mr. SLIGH. On his introduction, page 11, summing up his achievements.

Mr. FREAR. There were 213 DH-4's on the battle line used in service at the time of the signing of the armistice.

Mr. SLIGH. Yes, sir.

Mr. FREAR. The only American-made airplanes, according to the testimony. Others that they claimed were received, they were not battle planes.

Mr. SLIGH. Some of this spruce was shipped for allies. There was none of the spruce that he produced after taking charge December 1 that could possibly have been available before February 1 for airplane work. It had to be shipped and sawed and kiln dried, and it might have been possible and it may be he might have gotten some into an airplane the 1st of February. It is an absolute misrepresentation that there was 143,000,000 feet of superselected spruce and fir.

He further, on page 13, makes the claim that there was from 85 to 95 per cent of the lumber that was actually usable. Now, I have here, which I am going to leave with your committee, a report from the Grand Rapids Airplane Co., from the files—copies of the letters from the files, the original of which I have and can produce any time, if necessary, showing—and I will say that the Grand Rapids Airplane Co. was a company organized for the purpose of getting out the parts of the Handley-Paige machine, the largest machine that was manufactured or authorized by the board. But there was something like 2,800 feet of spruce necessary for use in that plane. There was

shipped to Grand Rapids 6,326,535 feet of lumber by Col. Disque—all of this was done under his administration. The contract was not let until March for airplane purposes, and there was only 1,213,199 feet suitable for use. The rest was junk.

Mr. FREAR. Why?

Mr. SLIGH. Much of it was sold——

Mr. FREAR. What was the reason of that?

Mr. SLIGH. Why, it was the poor quality of stuff and the shipping out; instead of shipping out quality of stuff that he claims was 90 to 95 per cent good, superselected, the most of it was culls and stuff absolutely worthless.

Mr. FREAR. Who else was aware of that fact in Grand Rapids—anyone?

Mr. SLIGH. This is the report signed by the manager of the Grand Rapids Airplane Co. This is a copy I am going to leave with you.

Mr. FREAR. Yes.

Mr. SLIGH. And everybody in Grand Rapids that had anything to do with that company knows these facts. And I say I have the originals of these and can furnish them to you if you want them. Out of the lumber there was one car shipped there—I have the detailed special report on that right here. There was one car there of the Chicago, Milwaukee & St. Paul, No. 203984, in which one of Col. Disque's own inspectors said it was "rotten," using his words.

Mr. FREAR. Who was he?

Mr. SLIGH. His name was E. L. Spriggs.

Mr. FREAR. What was the reason he made the statement?

Mr. SLIGH. Because there was only 7 per cent of that entire car could be used.

Mr. FREAR. Seven?

Mr. SLIGH. Seven per cent.

Mr. FREAR. Where was that, Mr. Sligh?

Mr. SLIGH. The Grand Rapids Airplane Co. I am going to leave that copy with you. I can furnish the original whenever you need it. This statement here—all of these letters are calling attention to the fact of the very poor quality of spruce that was shipped to Grand Rapids; showing that—here is one report here that is made by F. S. Cutler. There were so many complaints went from Grand Rapids in regard to quality they were getting that they sent an inspector there to F. S. Cutler. This was September 25, 1918, and he reported they had scaled over in Grand Rapids more than 2,500,000 feet of this lumber and in it they found only 300,000 feet suitable for use.

Mr. FREAR. How much?

Mr. SLIGH. Three hundred thousand feet out of 2,000,000. This is the copy that I read.

Mr. FREAR. What was he?

Mr. SLIGH. He was an inspector sent there especially to look over the character of wood that had been shipped to Grand Rapids on account of the complaints of the airplane company.

Mr. LEA. From the coast?

Mr. SLIGH. I think Cutler was from the coast.

Mr. LEA. I mean this——

Mr. SLIGH. Yes; that was all shipped from the coast, every bit of it.

Mr. FREAR. This was sawed timber?

Mr. SLIGH. All sawed lumber, yes, sir; all sawed lumber. And every foot of this lumber that was sent to Grand Rapids was kiln-dried after it was sent there.

Mr. FREAR. Was this lumber—this lumber supposed to be inspected before it left the coast?

Mr. SLIGH. It was supposed to be inspected before it left the coast, and it was reinspected again after it got to Grand Rapids by the airplane company for their own satisfaction; they found so much of it that was bad that they could not use; they were continually complaining about it, and all these letters here are letters showing the quality of the stuff. A great deal of it you will find was marked "G list." G list was a very inferior quality.

Mr. FREAR. That was the poorest grade, or cheapest grade?

Mr. SLIGH. It was the poorest grade.

Mr. FREAR. I was going to say that could be considered in connection with airplane stock?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Now, you told me only 7 per cent was used of that stock. What was done—

Mr. SLIGH. That was only out of this one carload, Mr. Chairman.

Mr. FREAR. Yes. I wish to get the relation of that. The Government paid for that?

Mr. SLIGH. Yes. Well, no; this lumber was all charged up to the Grand Rapids Airplane Co.; the Government paid—

Mr. FREAR. The Government paid to produce it out West?

Mr. SLIGH. Yes, sir.

Mr. FREAR. That is, one of the companies?

Mr. SLIGH. Yes.

Mr. FREAR. That is, paid the Perry Spruce Co. or the Carey Co. for this?

Mr. SLIGH. Yes.

Mr. FREAR. It was inspected and forwarded, and paid for, of course, by the Government, then forwarded to the Grand Rapids Airplane Co.?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Now, it was found upon arrival there that only 7 per cent of it—

Mr. SLIGH. Only 7 per cent of it was fit for use.

Mr. FREAR. Yes; that only 7 per cent of it was fit for use. Now, what took place then?

Mr. SLIGH. Why, of course they used what they could, and the rest was thrown out into a dump pile.

Mr. FREAR. Did they pay the full amount or what? What did the Grand Rapids factory, to which it was sent, what did they do?

Mr. SLIGH. Well, I can not tell you in regard to that.

Mr. FREAR. Did they pay for the full amount, or what?

Mr. SLIGH. I can get that information for you.

Mr. FREAR. I didn't know but what you knew.

Mr. SLIGH. No.

Mr. FREAR. That is, did they pay for the hundred per cent or did they pay according to what was used at Grand Rapids? I am trying to find out what the Government had to say or where they came out.

Mr. SLIGH. The Government undoubtedly paid for it. I can get that for you.

Mr. FREAR. Do you know whether the Government received anything back, more than the 7 per cent that was passed by the inspector at Grand Rapids?

Mr. SLIGH. I don't think they did, because when those cars were shipped out there they had settled for them very rapidly.

Mr. FREAR. Was there anything usable that was over and above the 7 per cent?

Mr. SLIGH. It was usable for packing lumber; there was large quantities of the lumber sold in Grand Rapids there for packing pump purposes, for \$17.50 and upward.

Mr. FREAR. Up to what?

Mr. SLIGH. Up to \$30.

Mr. FREAR. We paid for it—

Mr. SLIGH. On an average, several hundred dollars. They paid all the way from \$45 up to—besides freight, up to over \$500.

Mr. LEA. Who sold it to him?

Mr. FREAR. The \$45 freight was the cost from the coast here—or to Grand Rapids?

Mr. SLIGH. No, that was \$45 at the coast; there was some of that cheap stuff.

Mr. FREAR. I do not suppose you could tell who it was sold to the Government at that point?

Mr. SLIGH. No, I could not.

Mr. FREAR. There were so many producers at that point?

Mr. SLIGH. No. There were a hundred out there.

Mr. LEA. You spoke of some of it being sold for particular purposes.

Mr. SLIGH. This particular carload came from Doty.

Mr. FREAR. Doty?

Mr. SLIGH. It is not D-o-u-g-h-t-y. This came from a man by the name of D-o-t-y, the Doty Lumber Co.

Mr. FREAR. From where? Where are they?

Mr. SLIGH. They are out on the coast. I thought it was on this bill. This is a copy of the report. But I don't see it here just now. You can readily ascertain.

Mr. FREAR. Yes, I understand. It came from Doty. Doty is a private business man.

Mr. SLIGH. Yes.

Mr. FREAR. What connection did the Government have with them?

Mr. SLIGH. Well, they bought from him this lumber.

Mr. FREAR. The Government forwarded it to Grand Rapids?

Mr. SLIGH. Yes.

Mr. FREAR. But they secured it from Doty?

Mr. SLIGH. They secured it from a man named Doty, the Doty Lumber Co., located somewhere out there. This gives as a reason for the prices—diagonal or cross-grained, had less holes, worm holes, etc.

Mr. FREAR. From what are you reading, Major?

Mr. SLIGH. This carload of which only 7 per cent was good.

Mr. FREAR. Who made that report?

Mr. SLIGH. This was made by E. L. Spriggs, the Government inspector, at Grand Rapids. All these others are submitted to you for the purpose of giving evidence of the fact of quality of the stuff he had shipped.

Mr. FREAR. That is what was being shipped from Portland, Oreg.!

Mr. SLIGH. That was being shipped from Portland or other places there and in which he claimed 85 to 95 per cent was good, when as a matter of fact it would not average, in my opinion, more than 25 per cent.

Mr. FREAR. This was on what date?

Mr. SLIGH. Well, this carload here was August 12, 1918.

Mr. FREAR. The Government was paying, you say, several hundred dollars; of course it all depended upon the various operations in arriving at a very high figure per thousand for this airplane stuff, and when it reached Grand Rapids only a small portion of it was available; you say about 25 per cent.

Mr. SLIGH. I have given you the total here of the Grand Rapids. Out of 6,300,000 there was not more than 213,000 feet fit. And in addition to that there were three carloads shipped to Grand Rapids that was so poor they would not unload it and they diverted it to some other point; I don't know where it was diverted.

Mr. FREAR. What were the Grand Rapids Co. paying for that to the Government?

Mr. SLIGH. They paid all the way from \$45 for some short pieces up to over \$500. There was some of the lumber billed to them over \$500.

Mr. FREAR. Did they pay \$500 to the Government?

Mr. SLIGH. Yes, sir. That was charged up to them on their contract.

Mr. FREAR. Well, I am trying to get at the point now; the contract you spoke of this morning was for \$105 for airplane stock; that is what you—

Mr. SLIGH. The specifications that were adopted at this international meeting in Washington in July was on the basis of \$105 for the No. 1, and \$150 for wing beam stock.

Mr. FREAR. Now, that was the agreement up to what time?

Mr. SLIGH. That was for the quality that conformed to No. 1.

Mr. FREAR. Yes.

Mr. SLIGH. But in addition to that, after Disque went out there, he revised that and he established a price of \$80 for some and \$140 or \$150 for another grade, and \$200 for another grade.

Mr. FREAR. I am trying to ascertain how it was this was billed to the Grand Rapids concern for \$500; they were obliged to pay the Government \$500.

Mr. SLIGH. They did not pay that for all of it. They paid the Government that for some selected stock shipped to them for selected wing beam stock.

Mr. FREAR. Was all under this contract here?

Mr. SLIGH. It was a different quality.

Mr. FREAR. This contract that provided for \$200, I understood that was for the best; what was it, airplane sock?

Mr. SLIGH. The \$200 was supposed to be for the best; yes, sir.

Mr. FREAR. How was it, unless there was some separate contract by the Government, they could be compelled to pay \$500?

Mr. SLIGH. There were plants in Grand Rapids and also other portions of the country that they were shipping immense quantities of inferior-grade stock that could not be used for the stress parts of a machine.

Mr. FREAR. Yes.

Mr. SLIGH. And it was necessary for them to get out some absolutely clear stuff, a portion of which was shipped to Grand Rapids, and they charged them, I think, \$540 a thousand.

Mr. FREAR. Who charged them?

Mr. SLIGH. The Spruce Division.

Mr. FREAR. The Spruce Corporation?

Mr. SLIGH. Later it was the corporation.

Mr. FREAR. Yes; it was the Spruce Production Division, and later the Spruce Corporation.

Mr. SLIGH. Later the Spruce Corporation.

Mr. FREAR. That was fixed by Maj. Disque, was it?

Mr. SLIGH. Or under his authority.

Mr. FREAR. Arbitrarily, or was it—

Mr. SLIGH. Of course, arbitrarily. They said, "We have to have this immediately." Of course, they were working on a cost-plus basis; it did not make any difference what the cost was to Grand Rapids, as long as they got the stuff and had the work.

Mr. FREAR. What was the object of Portland—

Mr. SLIGH. As public citizens we were interested in keeping the cost down. As long as we had no control for the making of these planes we had to get out, and it was on a cost-plus basis, and of course that increased the cost.

Mr. FREAR. Certainly. Let me see if I got this correctly. This lumber was secured from the various manufacturers on the coast—purchased by the Government—at what price, do you know?

Mr. SLIGH. By the Grand Rapids Airplane Co.?

Mr. FREAR. No; by the Government at Portland.

Mr. SLIGH. No; I don't. There were so many different grades.

Mr. FREAR. Purchased by the Government at that point and shipped on; and some of that there was only 25 per cent available.

Mr. SLIGH. This says not more than 25 per cent.

Mr. FREAR. Then the Government, through that end of it, the Spruce Corporation, they charged the people over \$500?

Mr. SLIGH. For some.

Mr. FREAR. That is, they fixed the price arbitrarily?

Mr. SLIGH. Arbitrarily.

Mr. FREAR. Then the Grand Rapids people—and I suppose that was true of the Curtiss people also—they were under a cost-plus contract, so it did not make any difference with them what they paid, because the Government was paying them cost-plus?

Mr. SLIGH. That is the idea. They were more particular in regard to the cost, not the grade.

Mr. FREAR. If they were paying \$540 a thousand and shipping these goods here, it did not pay for the cost of it, did it?

Mr. SLIGH. It didn't hardly pay the freight. I would like to leave that with the committee.

Mr. FREAR. The originals you have?

Mr. SLIGH. I can produce them if you want them.

(Which said documents were marked by the reporter for identification "Sligh Exhibit A, August 11, 1919.")

Mr. SLIGH. Col. Disque, on page 12, claims he eliminated competition.

Mr. FREAR. Page 12 of what?

Mr. SLIGH. Competition in the purchase of spruce.

Mr. FREAR. I mean page 12 of what?

Mr. SLIGH. Page 12 of his introductory report, of his introduction to Col. Griggs's report.

Mr. FREAR. The report that he sent to Washington?

Mr. SLIGH. Yes, sir; giving a history of his operations.

Mr. FREAR. I see.

Mr. SLIGH. And he claims to have eliminated competition. I eliminated competition in July, four months before Col. Disque had anything to do with it. That was one of the first things that was done in this work—

Mr. FREAR. At the time you had that meeting you spoke of?

Mr. SLIGH. Yes, sir.

Mr. FREAR. As an international delegate?

Mr. SLIGH. So that is where he not only misrepresents facts, but he becomes—that is where he becomes a faker in trying to appropriate credit to himself. Of course, if it was not a creditable thing he would not have tried to appropriate it.

Mr. FREAR. That was before four months—

Mr. SLIGH. Four months before he came in it was done. He also claims credit, on page 13, for having substituted fir and Port Arthur cedar for spruce. As a matter of fact, as I have stated, I did that work and I placed orders for 15,500,000 feet of fir in September.

Mr. FREAR. That is in the matter you have stated in your testimony this morning?

Mr. SLIGH. Yes, sir. And Italy had already ordered 10,000,000 feet previous to that.

Col. Disque also claims, on page 15, 25 per cent that I have already mentioned in regard to quality. These are some of the things, 8 or 10 claims, and they are practically about all of the claims he has made there, what he claims credit for, and for which he is not entitled to credit, and he would not have appropriated them and claimed them unless he thought they were creditable; and his testimony or his statement on almost anything can not be taken as reliable.

Mr. FREAR. You made a statement this morning, Major, to the effect that if the labor troubles had been handled correctly and the people in Washington and Oregon had been given military protection as they requested, that the production would have been largely increased.

Mr. SLIGH. Yes, sir.

Mr. FREAR. To what extent could that production have increased by the lumbering men of the coast?

Mr. SLIGH. Why, after the commandeering, early in September, when we had arrived at an understanding by which the millmen could ignore their old contracts and work for the Government, they were in a position at that time to have produced, with the proper protection, at least from four to six million feet of spruce every month.

Mr. FREAR. Now, that would be working how many hours a day?

Mr. SLIGH. Well, they were working on a 10-hour basis.

Mr. FREAR. Yes. If they had been working double time, would it have been possible to have increased that?

Mr. SLIGH. Unquestionably, unquestionably.

Mr. FREAR. That is, in the woods as well as in the mills?

Mr. SLIGH. Yes, sir. The mills could have done ten times that. There were mills enough there to have done ten times that.

Mr. FREAR. How many mills are there, would you say?

Mr. SLIGH. Well, there are hundreds of mills. There are about 400 mills in Washington and Oregon that could have cut on the lumber. You will find that in some of the statements there. I have given you some facts in regard to that.

Mr. FREAR. I am familiar with that.

Mr. SLIGH. There never was any justifiable reason for the building of the plant at Vancouver, for the reason they had ten times more mill capacity than they had the spruce. Right on that point I would like to state that originally that Vancouver proposition was made on the basis of costing about \$200,000; but this report of Col. Disque's acknowledges it cost over \$875,000.

Mr. FREAR. It cost considerably over a million.

Mr. SLIGH. I am informed it cost over a million.

Mr. FREAR. I have the figures here. What was the necessity of cutting those logs and sending them to Vancouver?

Mr. SLIGH. There was absolutely no reason whatsoever. I had recommended cutting to dimension early in June. My idea was to cut at the mills and it could have been done by putting in a cross cut and rip at each mill, which could have been done at a comparatively small cost. And that was ignored. As a matter of fact, in October I was instructed by Col. Waldon, who ordered lumber for 3,000 Spad machines that the Government contracted for.

Mr. FREAR. That is, you mean airplane stuff for the Spad machines?

Mr. SLIGH. For the Spad machines. The Spad machine was a French machine.

Mr. FREAR. A French fighter?

Mr. SLIGH. A French fighter. It was the same machine that Guynemeyer used, and they had samples in Washington, and it was sent up to Buffalo. I went up to Washington with Domoy and I measured up that machine myself, and I contracted and ordered the lumber, and I sent the specification for them to cut in dimension lumber to that Willoughby Lumber Co.

Mr. FREAR. That is in Willoughby, Oreg.?

Mr. SLIGH. That is in Willoughby, Oreg.; and that was the first dimension stock, and they cut it and the lumber was shipped in November and early in December, and was all shipped to France February 1 or January.

Mr. FREAR. Now, I wish to go back and hold for a moment to that question of 6,000,000 feet of spruce that could be sawed a month. What have you to make that—what have you for the basis of that: that is, that 6,000,000 feet of spruce could be logged and could be sawed and gotten out in a month under the 10-hour basis?

Mr. SLIGH. The conversations I had, conversations with Mr. Doty; with Mr. Hawkins; with Mr. Jayne.

Mr. FREAR. That is the producer in Oregon?

Mr. SLIGH. All of these are producers, yes. And letters I had from Merrill Ring & Co. and from Alexander Polson.

Mr. FREAR. Polson was a logger at Gray's Harbor.

Mr. SLIGH. One of them, yes; on the coast.

Mr. FREAR. He was logging at Quinault's reservation?

Mr. SLIGH. Yes, sir. And personally and by letter I was told this could be done.

Mr. FREAR. Would this average be 6,000,000 feet every month?

Mr. SLIGH. Every month.

Mr. FREAR. Throughout the year?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Now, you say that by doubling the capacity of the mills or increasing the time so as to have day and night shifts and increase the force in the woods, what increase could have been added to that, would you say; would you estimate?

Mr. SLIGH. Well, the mill capacity was almost unlimited, as far as that was concerned.

Mr. FREAR. Then it would have been a question of logging?

Mr. SLIGH. Yes.

Mr. FREAR. What increase could have been made, as far as employees that could have been placed upon the job?

Mr. SLIGH. The owners of nearly all the Port Arthur cedar on the coast, which you may be familiar with, grows in a very restricted district there—Coos Bay Co., they came to see me.

Mr. FREAR. That is Mr. Marshall?

Mr. SLIGH. Yes, sir. They had been in financial trouble. They were one of the C. A. Smith corporations and they had become tied up in his failure, and they wanted a loan of \$500,000.

Mr. FREAR. From the Government.

Mr. SLIGH. From the Government. And which at that time the Government—a law had been passed authorizing advances under proper security.

Mr. FREAR. Let me say in passing advances were made to a number of these companies in the country working spruce.

Mr. SLIGH. I know they were. They asked for this advance of \$500,000, and offered to give ample security, and said if that was done they would extend their railroad and they would agree to produce—oh, a very large increase. It don't come to my mind just at this minute; I think I have a memorandum that I could substantiate it. This came just about the time that I was superseded in this work. They were there at that time, and I made a written communication, recommending that this be made. A few days afterwards I was superseded and it was turned over to Leadbetter, and instead of carrying out that recommendation he wired Col. Disque and Disque wired back to have it commandeered.

Mr. FREAR. I am getting this cost of production. If 6,000,000 feet could be produced a month of spruce, that is, this was for airplane stock.

Mr. SLIGH. Airplane stock.

Mr. FREAR. If that could be produced a month, that would be over 70,000,000 feet a year, and by doing—putting on night crews or doubling the crews in the woods; of course, as far as the mills were concerned, it was immaterial; they could, you say, saw up any quantity. Now, by doubling the crews in the woods, what would have been the difference in the amount of production of spruce?

Mr. SLIGH. Well, probably doubling the crews would not have doubled the production, but it would very largely increase it, probably two-thirds.

Mr. FREAR. There were 2,000 men sent out there under Disque?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Soldiers.

Mr. SLIGH. Yes.

Mr. FREAR. And added to the crews that were there before.

Mr. SLIGH. Yes.

Mr. FREAR. Now, with that number of crews working there, do you know what they would have been able to have done?

Mr. SLIGH. Well, the information that was given me when I was out West—I was out West the first of May, 1918, and I went down to the Vancouver barracks, and he had 2,000 men at the Vancouver barracks; the sawmill had been in operation but it was a failure and he had to reconstruct the whole thing.

Mr. FREAR. At Vancouver?

Mr. SLIGH. At Vancouver. They had put in the wrong kind of saws. They had put in circular saws when they should have put in band; and he did not know the difference between a band saw and a circular; and it was being reconstructed at that time. It had only been in operation a couple of months. There were 2,000 men on the ground there and they were only working about 200 or 300 of them. The man in charge of operations told me——

Mr. FREAR. What was the rest of them doing?

Mr. SLIGH. Marching time, marking time; doing nothing. They were recorded at the Vancouver Barracks there doing nothing. The man running the sawmill told me it did not run sometimes 6 hours or 10 hours. They were building the dry kiln. If it had run night and day, he said the total force would have been about 990 men; so that two shifts would have had use for less than 1,200 men if they were running double shifts; but they were not doing that.

Mr. FREAR. That was at the mill?

Mr. SLIGH. At the mill.

Mr. FREAR. That was useless, you say, because the other shifts were not occupied anyhow. They could have sawed that without the use of this Vancouver mill?

Mr. SLIGH. I say the Vancouver mill was an absolute waste of money.

Mr. FREAR. What about the Toledo mill?

Mr. SLIGH. The Toledo mill, that was not operated, was it?

Mr. FREAR. No. But they used \$800,000 in constructing it.

Mr. SLIGH. Yes, sir.

Mr. FREAR. The report already made the other day shows that. If the Vancouver plant cost \$1,975,775, do you know whether that includes any cutting of lumber in the plant?

Mr. SLIGH. I didn't know it cost as much as that. I knew it was over a million.

Mr. FREAR. The Toledo on Maumee Bay, according to this, cost \$821,825. Was that sawmill necessary, from your standpoint, or could the loggers have furnished it without?

Mr. SLIGH. Those logs, of course, could have been transported to some other mill. That was to cut the lumber of the Blodgett tract. was it?

Mr. FREAR. They never got anything out of the Blodgett tract. and this mill was never in operation and never used.

Mr. SLIGH. The Blodgett tract, as you know, was paid for after the armistice was signed.

Mr. FREAR. I know it was. But I want to get some facts from you. The Simms Carey Corporation received \$3,988,511 for building a railroad from Lake Crescent to Lake Pleasant, 40 miles long. to

ship spruce 40 miles away. That is at the rate of over \$100,000 a mile, which is a continuation of the Milwaukee system.

Mr. SLIGH. John D. Ryan was a director.

Mr. FREAR. He is connected with the executive committee, and also the board of directors, and at the same time he was a director of the aircraft activities at Washington. What I wanted to ask you, was it necessary to build that railroad? If so, for what purpose?

Mr. SLIGH. Well, I don't think my testimony would be valuable to you for that, for it is all hearsay.

Mr. FREAR. Just a moment. If these mills in operation could cut the amount of spruce that was required——

Mr. SLIGH. Oh.

Mr. FREAR. If the loggers that could have been employed were able to furnish all the logs that were necessary to keep them employed, I am asking what was the purpose in building a railroad 38 miles long at a cost of over \$100,000 a mile, in the neighborhood of \$125,000 with another allowance down here—\$125,000—to ship spruce 40 miles away?

Mr. SLIGH. Nothing.

Mr. FREAR. I am quoting from Maj. Ray.

Mr. SLIGH. From your standpoint it was an absolute waste of money.

Mr. FREAR. What, in your judgment, was the necessity for building a railroad from Newport north and Newport south to tap the different sections of country there for the purpose, as announced, of getting out spruce? Was there any, so far as you can ascertain, and if so, what?

Mr. SLIGH. I don't know about that Newport proposition. I am ignorant on that.

Mr. FREAR. Do you know anything about the Blodgett tract? That is about 25 miles south of Newport.

Mr. SLIGH. Mr. Blodgett is a neighbor of mine.

Mr. FREAR. In Michigan?

Mr. SLIGH. Yes, sir; a neighbor of mine; we live in the same block. I was informed when he was there with his attorney, Mr. Mark Norris, who had been called there for the purpose of negotiating the purchase of this. Mr. Blodgett asked for \$685,000 for this tract.

Mr. FREAR. How much timber was on that?

Mr. SLIGH. There was something like 600,000,000 timber on it.

Mr. FREAR. Do you know what the estimate was of spruce?

Mr. SLIGH. Mr. Blodgett gave me those figures at the time, but my impression is about 265,000,000 of spruce. That is my recollection now.

Mr. FREAR. Would you say, judging from the estimates we have that that was all airplane stock?

Mr. SLIGH. Oh, no; no; no.

Mr. FREAR. Then what proportion of airplane stock would that be likely to average?

Mr. SLIGH. Well, the experience in regard to cutting spruce was that the method that was adopted only produced about 15 to 20 per cent of airplane stock.

Mr. FREAR. Then if a road was being built 25 miles south to strike this Blodgett tract, it would reach about 30,000,000 feet of spruce, according to that statement?

Mr. SLIGH. Exactly; suitable for airplane purposes.

Mr. FREAR. For airplane purposes.

Mr. SLIGH. Yes.

Mr. FREAR. I want to get back to that Blodgett tract, if you please.

Mr. SLIGH. Mr. Blodgett saw Disque on Disque's invitation, and Disque referred him to Col. Hitchcock. He told me Hitchcock assumed a very dictatorial, bluffing attitude toward him, and when he made his price of \$635,000 that Hitchcock told him it was not worth that and he would not pay it; and he said that he had a friend of his that would buy the property for \$450,000.

Mr. FREAR. Did he give the name of the friend?

Mr. SLIGH. Blodgett gave it to me at that time. No, he did not give it to me at that time; that he would pay \$450,000.

Mr. FREAR. Hitchcock was the man, the contractor?

Mr. SLIGH. Hitchcock was the man that did that work under Disque.

Mr. FREAR. Yes.

Mr. SLIGH. Blodgett told him he would not sell it for that price, and he accused Blodgett of being unpatriotic. And Mr. Blodgett is one of the most patriotic men in the country, and it is demonstrated; and he called him sort of hard names. He told him if he would not take that price for it he would see it was commandeered and he would not get that much for it. So Blodgett told him to go ahead Disque had just been called down there by the department to show why he was not getting results.

Mr. FREAR. When was that?

Mr. SLIGH. That was about the 1st of July, 1918. Gen. Carnack had made a complaint to the department that Disque was not producing as much as Sligh did, and it was on account of that complaint from Gen. Carnack, he showed he had about 125,000 under his control, and we had nothing but volunteer labor. Hitchcock wired him from Portland; he wired Disque, and Disque wired back he would commandeer it. He thought he would bluff Blodgett into it. But Blodgett was a man that could not be bluffed. He knew his rights and he knew he was asking a reasonable price.

Mr. FREAR. Down to that time had there been any railroad built—down to that time?

Mr. SLIGH. Hitchcock then said, "If you won't sell this for \$450,000 we want you to build a railroad in there for the benefit of the Government."

Mr. FREAR. That is 25 miles to Newport?

Mr. SLIGH. I don't know what distance it was. It was going to cost him, I think, \$160,000, something of that kind. Blodgett said that would not be for the benefit of the Government; that would be for the benefit of that tract. And he refused to do it. This was carried on for some time.

Mr. FREAR. Blodgett is familiar with all these matters?

Mr. SLIGH. Oh, thoroughly.

Mr. FREAR. These are matters he has stated to you?

Mr. SLIGH. Yes, sir.

Mr. FREAR. It is simply for our information.

Mr. SLIGH. He gave me that information in Portland. And after I returned here, along about two or three months later, he called me to his office and he read over to me a lot of letters and correspondence.

in the presence of Mr. Mark Norris, in regard to this matter before they had arrived at a settlement, and along about August, I think it was, when Disque found he could not bluff him he agreed to buy the tract from him for \$635,000.

Mr. FREAR. How much would that be a thousand?

Mr. SLIGH. Probably a little over \$1 a thousand; \$1.15.

Mr. FREAR. For spruce?

Mr. SLIGH. For everything.

Mr. FREAR. I suppose it was spruce, hemlock, and fir.

Mr. SLIGH. Yes, sir; and probably cedar.

Mr. FREAR. And probably cedar.

Mr. SLIGH. It was worth that. The agreement was made, as soon as Blodgett got the abstracts all ready, that they would buy it. Well, he got his abstracts and he got his title all perfected, and it was along—he told me in October some time, early in October.

Mr. FREAR. October, 1918?

Mr. SLIGH. October, 1918; and he never got his money for it until after the armistice was signed.

Mr. FREAR. Were the contracts completed and everything before that?

Mr. SLIGH. He told me that he had done his part but the contract for the purchase had not been consummated until after the armistice.

Mr. FREAR. Was there any reason given for not paying it until after the armistice?

Mr. SLIGH. No reason given. Of course, I tried to pump him; there was rumors that he paid \$25,000 for it. But Mr. Blodgett is not that kind of a man.

Mr. FREAR. Do you know that the rumor of Col. Disque was that this lumber could be resold and the report of the forests is that it should be retained under Government ownership?

Mr. SLIGH. No.

Mr. FREAR. That correspondence will be inserted later on in the record. What else do you know about the Blodgett tract?

Mr. SLIGH. That is substantially all that I know about it.

Mr. FREAR. Do you know anything about the railroads down there to be built?

Mr. SLIGH. There was another tract that a Grand Rapids man was interested in that is up by Clallam.

Mr. FREAR. In the Northwestern portion?

Mr. SLIGH. Yes, sir. Mr. Butterfield of Grand Rapids and W. F. Keeney and the James Estate and George Lacey are large owners there.

Mr. FREAR. How near the coast, do you know?

Mr. SLIGH. It is not near the coast. It is more accessible to Puget Sound.

Mr. FREAR. I mean the sound.

Mr. SLIGH. They built a railroad to that and got just to the edge of that when the armistice was signed. I think that was the St. Paul road, if I am not mistaken. Mr. Keeney and Mr. Butterfield both went out there to consummate those arrangements. Both of those gentlemen are men of the highest character and integrity; they are both of them attorneys, and they have a very high reputation in Michigan, and they are both of them very good lawyers. Mr. Herman Hitchcock tried the same bulldozing tactics with them.

They offered to sell him their spruce at \$5. He offered them, I think, \$1.50. And eventually they compromised by the department making a contract to pay them \$5.

Mr. FREAR. That is in Clallam County?

Mr. SLIGH. That is in Clallam County; about 5,000 acres there; they built a road practically up to their land, I am told, but they never cut any. It was the same bulldozing tactics that he assumed toward Blodgett.

Mr. FREAR. You say the same bulldozing tactics. What would you say he was trying to do; was he trying to benefit anyone?

Mr. SLIGH. The reason Blodgett gave me that he was trying to make the purchase for \$180,000 less than his price, for the benefit of a friend that would like the property.

Mr. FREAR. And resell to the Government.

Mr. SLIGH. Resell to the Government.

Mr. FREAR. That was his judgment, then?

Mr. SLIGH. That was Hitchcock's proposition, that he had a man who would buy it for \$450,000 and take it out.

Mr. FREAR. What was the reason given?

Mr. SLIGH. Mr. Keeney and Mr. Butterfield had several talks with me but they never gave—

Mr. FREAR. Did he say it was for the Government or some other party?

Mr. SLIGH. He did not say whether it was for the benefit of some friend or the benefit of the Government.

Mr. FREAR. Did Hitchcock afterwards remain in the employ of the Government?

Mr. SLIGH. Yes, sir. He was colonel, and afterwards made major.

Mr. FREAR. Did he afterwards resign?

Mr. SLIGH. I don't know that he resigned. He came from Cleveland and was reported as being an intimate friend of Newton D. Baker's.

Mr. FREAR. What else do you know, major, that is of—that occurs to you now, of any special interest?

Mr. SLIGH. I don't think of anything else just this minute.

Mr. FREAR. I have some communications here that I do not care to refer to particularly. Did you ever hear of the Longacre report made in July, 1918, to Maj. Wolf?

Mr. SLIGH. No, sir; I never did.

Mr. FREAR. He makes one or two statements, and I want to ask you if you are familiar with them; he was sent out by the Government and I talked with him in my office, and this is his report, and this is an extract I am reading, and I want to ask you if his judgment in regard to this as a Government inspector is right. He says in his report:

The yield of airplane stock from both sawn and rived cants at the cut-up plant for the month of March, and during which Lieut. Walker charged the costs S. P. D., was 19 per cent No. 1 wing beam; 7 per cent No. 2 area; 19 per cent No. 3 area.

What are the definitions to be applied to those, "19 per cent No. 1 wing beam"; that is, of course, for the wing beam on airplanes. "Seven per cent No. 2 area," what would that be?

Mr. SLIGH. No. 2 area, those were specifications that were installed by Col. Disque several months after he was put in charge

there; and I have a copy, I think, at home, but I have not here with me, defining the grading.

Mr. FREAR. Defining the grading?

Mr. SLIGH. Yes.

Mr. FREAR. The 19 per cent No. 3 area, that is the system of grading that he adopted?

Mr. SLIGH. Yes. There is an excess always of short sizes that are suitable for that work. But the wing beam is the long sizes; it has to be about 18 feet or longer, and it has to be clear, and for which a large price has always been paid. And then the shorter pieces can be gotten out of it—that is, the other can be gotten out of the shorter pieces and be equally as good, the quality is equally as good, but it is not as valuable because it might be cut out of slabs or something else.

Mr. FREAR. Longacre says:

No loss of log measure as against board feet when cut for plane operations above 14 per cent.

Do you know what he means by that?

Mr. SLIGH. I assume by that he claims they got everything, except there was 14 per cent loss on the log measurement.

Mr. FREAR. Yes.

Mr. SLIGH. This is a very extravagant proposition, though.

Mr. FREAR. I just want the definitions and we will come to the point of your passing judgment upon it later. This was a Government inspector sent out there [reading]:

Test of yield No. 1 and No. 2 selected spruce might be Mr. Breeze's plan during the week beginning April 1—

Let me say Mr. Breeze is George E. Breeze, and he was a candidate for governor in West Virginia, and he is an owner of several spruce sawmills in operation.

Breeze had a different plan. Test of yield, No. 1 and No. 2 selected spruce might be Mr. Breeze's plan during the week beginning April 1, 24.3 No. 1 wing beam; 53.3 No. 2 and 3 area; 77.6 total.

Now, he says here—and this important for us by way of information:

NOTE.—This test was from commercial logs, and the overrun in board feet as against log measure was 20 per cent. This means a difference in results between cants developed into lumber. Their cut-out plant had a loss of 14 per cent on commercial logs developed into lumber, was a gain of 20 per cent, or a net gain of 30 per cent, in favor of the commercial log as a basis.

Do you get that?

Mr. SLIGH. Yes; I get what he means.

Mr. FREAR. He states:

Fully 75 per cent of the tree from which rived cants are taken will be left in the woods, leaving an extraordinary amount of waste and may be destroyed from forest fires.

Just talking on the riving proposition. Now, he states further in his report:

Assuming that one of the Porter Bros. was correct in his statement—

Porter Bros. were contractors.

Mr. SLIGH. I know them.

Mr. FREAR (reading):

That operations would deliver under his contract of January 1, 30,000,000 feet of rived cants. This would mean that in the district covered by their operations there is approximately 1,140,000,000 feet of standing spruce timber.

That is, where Porter Bros. were operating?

Mr. SLIGH. Yes.

Mr. FREAR (reading):

Following their operations along the line of previous estimates gives the following results approximately:

Thirty million feet of rived cants, at \$130—

That was the price out there. [Continuing reading:]

\$3,900,000.

Sawing, at \$15 a thousand, \$450,000; or \$4,350,000 for that—

It says 30,000; it means 30,000,000. He says that—

Fifteen million feet of airplane timber, 275,000 board feet log measure.

That is what they get out of it, as I understand. I don't know whether you have got that clear or not. I am willing you should take this statement, and I will add this to it, and you can make your explanation for us. I expect to have him later before the committee, but I want your opinion as well on it. He takes Breeze's system and he says 627,000,000 feet of commercial logs at \$30 reaches \$1,881,000; sawing, at \$15, the same rate, \$940,500: a total of \$2,821,500.

Mr. SLIGH. He claims that was actual results?

Mr. FREAR. I don't know whether he claims the actual results or whether it is estimated. But, in any event, it is the difference between \$4,350,000 with the plans that were being pursued—

Mr. SLIGH. Yes.

Mr. FREAR. And the plan as proposed would reach \$2,821,000. Then he gives an additional statement here; it is not very long: I believe I will read it, and I believe I would like to have your explanation to the committee if you can give it to us. Quoting from the report:

There was delivered to the various spruce districts of Oregon and Washington during the 12 months ending April 1, 1918—the first 11 months actual figures, the last estimated by Mr. Longacre, of the bureau of forestry of Portland—approximately 350,000,000 feet of commercial spruce logs. Assuming that 65 per cent, Breeze's estimate—

This is a practical logger. [Continuing reading:]

were No. 1 and No. 2 commercial logs, the same will yield 113,750,000 feet of airplane spruce lumber, properly manufactured, inspected, and used.

That is during the year. [Continuing reading:]

I understand that the Government's requirement at the present time is approximately 220,000,000 feet per annum of airplane spruce lumber: we would have double the present natural supply of spruce logs to obtain requirements. In view of the fact that mills are already in operation that could manufacture a large increase over this amount, and with only logging production speeding up the undertaking does not seem impossible by any means.

In other words, he states at the present time; that is, before the railroads were built, before the Vancouver cut-up plant was built before the cut-up plant at Port Angeles, the cost of which was in the neighborhood, I think, of a million dollars, before the cut-up plant at

Toledo, which it was shown was over \$800,000, and these various railroads—that at that time they were producing or could produce at that time 113,000,000 feet, and they could double that by increasing the logging operations. Now, that accords with your own judgment, as I understand.

Mr. SLIGH. They have had a sawmill capacity for doing this.

Mr. FREAR. Yes.

Mr. SLIGH. Yes, sir.

Mr. FREAR. Now, will you explain to us about that distinction that he makes there, if you can, between those figures I gave?

Mr. SLIGH. I don't like to testify in regard to anything that I don't—

Mr. FREAR. I am not asking you to testify. I am asking you to explain what his method of computation is, if you can do it. This is from an official report as rendered Maj. Wolf.

Mr. SLIGH. There is always an increase between log scale and the sawing scale.

Mr. FREAR. Yes, sir.

Mr. SLIGH. Which will run anywhere from 10 to 20 per cent increase. That is, when a log is sawed up it will produce 10 to 20 per cent more than the log scale.

Mr. FREAR. What is the reason for that, briefly?

Mr. SLIGH. Why, the reason is, under modern methods where they are using band saws there is less curve than there used to be.

Mr. FREAR. That is, less waste.

Mr. SLIGH. Less waste. When they used to use the old saw we take out a quarter of an inch by sawing. Now it takes out less than an eighth of an inch. And there is always a consequent increase between the sawed lumber and the log scale. That, I think, is reasonable. But my judgment would be that he is exaggerating the amount of airplane lumber that he secured by these methods. I would not want to say just how much, because a man could not unless—

Mr. FREAR. This is not what he secured but what could be secured under the conditions, the two different plans proposed.

Mr. SLIGH. Under this proposition there is 48 per cent here that he claims could have been gotten out of a log in one and 48 in another.

Mr. FREAR. Forty-eight per cent, was it, by the process that was being pursued, I understand.

Mr. SLIGH. Yes.

Mr. FREAR. And 75 out by the process—

Mr. SLIGH. I think they are both of them exorbitant.

Mr. FREAR. Extravagant?

Mr. SLIGH. The lumber was sawed at the Willoughby mill.

Mr. FREAR. Let me say Longacre was a practical logger for 20 years, he states in his report.

Mr. SLIGH. And that is the first one.

Mr. FREAR. That is the first one.

Mr. SLIGH. Yes, sir. He is a good deal nearer the truth than the other man. The spruce that was sawed to dimension at the Willoughby mill under the order I sent out in October, for shipment to France, produced about 25 per cent. That is, out of a certain quantity of spruce we got 25 per cent of airplane lumber. And the Spad

machine was a small machine, with only 28 foot spread; the wing beams were shorter, and all the material was less, and we could get a larger proportion of good stuff for the Spad machine than we could for a larger machine; and the total production by the Willoughby Mill Co. was about 25 per cent. That was the first dimension stuff cut.

Mr. FREAR. What became of the other 75 per cent?

Mr. SLIGH. That, of course, used to go in for other purposes. It went into rejects, box lumber and culls, and things of that sort.

Mr. FREAR. Was that caused by the knots and the grain?

Mr. SLIGH. Yes; and the pitch pockets and spirals, and various defects, which were excluded; probably some by the rapid growth. We are restricted to eight rings to an inch; and anything larger than that was thrown out. But from my knowledge I would say it would be an absolute impossibility to get the 76 per cent out of a log of airplane lumber.

Mr. FREAR. I have here with me also the statement made by Mr. — I think his name is Suzzelo.

Mr. SLIGH. Yes, of the Washington University.

Mr. FREAR. Suzzelo made a voluminous report to his third assistant secretary of war; have you read that?

Mr. SLIGH. No.

Mr. FREAR. This probably was made out there; I don't know that that is important. What do you sum up as to the conditions, in your judgment, that occurred out there under Mr. Disque's management in regard to his failure, that he pursued, in regard to the cutting of spruce and the handling of the operations, the building of railways, and various things that he did, so far as you gathered, judging from your experience as a man who had charge of this airplane-production work—the spruce production work—prior to Leadbetter?

Mr. SLIGH. Why, Col. Disque's whole operations were the result of his ignorance. He absolutely knew nothing about the business and he could not acquire it in a few minutes. But his general incompetency as an executive, his expenditures were wasteful and extravagant. I think they were criminally wasteful.

Mr. FREAR. Do you know how much was spent out there according to this report?

Mr. SLIGH. According to his report, they spent over \$48,000,000.

Mr. FREAR. That is a little over \$48,000,000, according to the report we have here on the spruce-production section.

Mr. SLIGH. And it was a wicked and wasteful expenditure of public moneys and absolutely unjustified and unwarranted and never produced the results that half that money would have produced if it had been conducted on business principles.

Mr. FREAR. You are aware, are you, as was testified by the last witness who was on this morning, that Disque gave to the soldiers—that is, the regular soldiers in service—the same rate or a certain rate of compensation—

Mr. SLIGH. Yes.

Mr. FREAR. As you stated, I believe, after a conference with Leadbetter and Gompers.

Mr. SLIGH. Yes.

Mr. FREAR. Was that necessary, in your judgment, or do you know anything about what the conditions were before, if they had

sufficient protection out there—military protection—to have handled it in the woods?

Mr. SLIGH. If they had had military protection and it was represented to us that not to exceed 15 to 20 per cent of the men were among the I. W. W.'s, the rest of the men wanted to work; if they had military protection there, and the rest in the woods were exempted, if it was recommended, why, it would not have been necessary to have put soldiers into the field, in my judgment.

Mr. FREAR. Now, it is undisputed, I take it, that Maj. Disque, or Col. Disque, had 30,000 soldiers there.

Mr. SLIGH. Yes.

Mr. FREAR. He had them work, and they were exempted; and they were working in the woods at civil, or the same—similar compensation to them paid to civilian employees.

Mr. SLIGH. When Col. Disque was originally sent out there and demand made for troops, Maj. Ludlow was sent to some of the encampments and others were sent to France, and one officer was sent to Battle Creek. I had a son-in-law who was at Battle Creek who had passed through the training camps and was commissioned a captain of an Artillery company and who was located there at that time. When the demand was made for so many hundred men from Battle Creek to go into the woods they asked for volunteers, and Capt. Miller was in a position to know, and when they came to his company, which they had something like 180 men, they asked for volunteers and nobody volunteered, so they made a selection out of the Battle Creek camp, and they picked out the poorest men and sent them to Washington.

Mr. FREAR. To work in the woods?

Mr. SLIGH. To work in the woods. They took those that were most efficient and competent, and they were afterwards sent overseas, and as nobody wanted to volunteer they picked out the poorest fellows and sent them there.

Mr. FREAR. What reasons occurred to you—and I am asking you because of your connection with this work, I assume you had some knowledge of conditions—what reason occurs for the payment to men who were soldiers in service, working for the Government, for limiting their time to specific hours, fixing their compensation at the same time as civilian employees who presumably were exempt from military service, when 2,000,000 men were over in France at the time fighting without limitation of hours and at \$1 a day, that is, as far as the enlisted men were concerned.

Mr. SLIGH. In my opinion, it was entirely unwarranted, and the only justification that Col. Disque would have for it was his agreement, or satisfactory arrangement, that he made with Samuel Gompers.

Mr. FREAR. Did you think that boys who were over in France under fire, and I speak very feelingly of this, for weeks and months at a time, working both day and night, should have been placed in that position by this Government, while these men out in the coast were exempted from any dangerous employment and were to be given the same rate of compensation, which ran from \$3.50 to \$8 a day, I believe the last witness testified, and in addition to that had their accident insurance paid by the Government under the cost-plus

contracts made with the Porter Co., the Spruce Co., and others; do you believe in that?

Mr. SLIGH. Most emphatically, I do not; no, sir.

Mr. FREAR. And you believe the only reason for that was by agreement with one of the labor leaders?

Mr. SLIGH. Yes, sir.

Mr. FREAR. Does anything else occur to you, Mr. Sligh?

Mr. SLIGH. Nothing that I know of.

Mr. FREAR. Well, I will excuse you now for the time being, and put on Maj. Morley, who has been called as a witness.

(Mr. Sligh was temporarily excused.)

TESTIMONY OF MAJ. JOHN E. MORLEY.

(The witness was first duly sworn by Mr. Frear.)

Mr. FREAR. Your initials, Major?

Mr. MORLEY. John E. Morley.

Mr. FREAR. And your business?

Mr. MORLEY. I am an attorney; practicing attorney.

Mr. FREAR. At Cleveland, Ohio?

Mr. MORLEY. Yes, sir.

Mr. FREAR. And you were attorney for the Spruce Production Co. as I understand it?

Mr. MORLEY. I acted as counsel for the Spruce Production Co. after it was organized.

Mr. FREAR. When was that?

Mr. MORLEY. The corporation was organized, as I recall it, some time, I should say, in August, 1918, but it did not function or get under way to take over the activities of the Spruce Production Division of the War Department until the 1st of November, just before the armistice.

Mr. FREAR. Before that it was the Spruce Production Division, known as that?

Mr. MORLEY. Yes, sir.

Mr. FREAR. And then a corporation was organized for, what was it, \$200,000?

Mr. MORLEY. The authorized capital was \$25,000,000.

Mr. FREAR. Was not that the amount they were authorized to raise under the sale of debenture bonds? My impression was \$100,000 capital.

Mr. MORLEY. My recollection is the authorized capital of the corporation was \$10,000,000.

Mr. FREAR. Who subscribed for the capital?

Mr. MORLEY. The director of Aircraft Production subscribed for all, except the qualifying shares.

Mr. FREAR. There were four or five other directors.

Mr. MORLEY. My recollection is more than that.

Mr. FREAR. They just took a nominal subscription, so as to qualify them.

Mr. MORLEY. They subscribed each for a share of stock.

Mr. FREAR. Now, that is introductory. I would rather for you to explain—the Secretary of War said he would be pleased to have you present, and to have you give all the information you could. If you will recite briefly about the way the matter was handled, so far as

the legal branch is concerned, and anything else that would be of information for the committee at this time, we will be very glad to have it first hand.

Mr. MORLEY. That is a very difficult matter for me, not knowing what you do want?

Mr. FREAR. I shall be glad for you to state briefly, of course it is an unusual proceeding to handle it in that way, there is no question in our minds on that, but if you will outline for us briefly what the situation was about the organization of this company, and what they did so far as they came under your observation.

Mr. MORLEY. I have not been in attendance on this hearing but a few minutes, and I do not know what has been testified to.

Mr. FREAR. Then, I will ask you questions, if you prefer it. I am in the attitude of one who desires information generally, and not equipped by study or experience to go into details.

Mr. MORLEY. From what I heard of the testimony of Maj. Sligh, in the last few minutes—I only came in a half hour ago—I think he is conveying an entirely false impression to the committee. I think he is a sorehead, and so far as I can see has done all in his power ever since he was relieved to bring the operations of the Government out there into contempt and handicap them in every way, and his testimony would so indicate from what I have heard here.

Mr. FREAR. Of course, with the training you have had, a man who has been qualified by study and experience to act for the Spruce Production Corporation out there, you realize that is not testimony.

Mr. MORLEY. I realize what I have heard——

Mr. FREAR. That is the position the committee is called upon to pass, and not the witness.

Mr. MORLEY. I realize it.

Mr. FREAR. Will you tell us the truth. That is what I am trying to ascertain from your standpoint.

Mr. MORLEY. I am here to give you any information you desire.

Mr. FREAR. Maj. Sligh, of his own motion, testifying here, has given us the information in accordance with his own judgment. We want yours.

Mr. MORLEY. I shall be glad to give you anything you want that I can.

Mr. FREAR. Do you know anything about the riving of logs? You say his testimony is false.

Mr. MORLEY. Very little.

Mr. FREAR. How do you know his testimony is false about riving of logs?

Mr. MORLEY. I do not want to get into a controversy with the committee.

Mr. FREAR. Tell the committee—you are here as an expert, because you say the opinion of a man who has been in this business for many years is false; we want you to tell us why; you are a lawyer—what percentage of the logs that go into the airplane timber, what was the expense. Characterize if you choose; we want to get the information. You have stated here your judgment of his testimony; we want to know whether your judgment is right.

Mr. MORLEY. Mr. Frear, I do not want to get into any controversy with this committee. I am here to testify to anything that I know, any questions that you might ask.

Mr. LEA. If I may make a statement here, so Mr. Morley may understand: The Secretary of War, who has been heartily cooperating in the work of the committee, when upon the stand, or just upon leaving the stand, particularly requested this committee to call you as a witness, and I assume that that is the reason the chairman called you. Now, if the Secretary of War thought you had some information which would be of benefit to the committee, and you have not got it, perhaps the Secretary was misinformed; but I wanted you to know it was at the particular request of the Secretary of War, as I understand it, that arrangements were made for you to testify here to-day. Is that right, Mr. Chairman?

Mr. FREAR. Secretary Baker made the request for you to testify, and I immediately wired you; it was entirely at his suggestion. The committee has no information; we want the information you have.

Mr. MORLEY. Along what lines?

Mr. FREAR. The Secretary of War did not tell us; we assume he communicated with you.

Mr. LEA. I think it was with reference to the attempt of the Government to get spruce on the coast; that is the impression I got.

Mr. MORLEY. Is it your desire that I give a brief narration of my connection with the enterprise, what I know about it, and my observations since I was there?

Mr. FREAR. I would assume this; we are just as much in the dark as you, unless the Secretary of War has communicated with you.

Mr. MORLEY. Has he not.

Mr. FREAR. Mr. Baker was before the committee two days, testifying, and at the conclusion of the two days, he said he would be pleased to have you come before the committee, because you were the attorney for the Spruce Production Corporation. Anything you think would enlighten the committee we would be glad to get. We place no limitations, and will let you state in your own way, except with the natural interrogatories that would come up during your recital.

Mr. LEA. In reference to facts in connection with the spruce situation on the coast; of course, if you do not know any facts about it, I assume the Secretary had an erroneous impression.

Mr. MORLEY. I feel I know a great deal about it. I was in touch with it, but to tell all the facts, you must see, would be a very lengthy proceeding.

Mr. FREAR. Let me ask you questions then. I did not know but what you had been communicated with.

Mr. MORLEY. No.

Mr. FREAR. You were employed there as the attorney for the Spruce Production Corporation?

Mr. MORLEY. Let me interrupt there, Mr. Chairman. I didn't go out there under any employment at all.

Mr. FREAR. State what your position was; tell us.

Mr. MORLEY. I was a commissioned officer in the United States Army when I went out there—detailed and sent out there.

Mr. FREAR. In what capacity?

Mr. MORLEY. Simply in the capacity of a commissioned officer in the Air Service. I had had some small experience in a military way in my younger days, and like most everyone else, when the war broke out, that had any military experience, I was desirous of placing

it at the service of the Government, and I did so when the war broke out. I seemed to be too old to get in the line of the Army.

Mr. FREAR. There were others of us in the same position.

Mr. MORLEY. In the fall of 1917, I think it was, about the 1st of October, I had a telegram from the War Department—I forget just what officer—wanting to know if I would accept a commission in the Signal Corps. I did not know anything about the Signal Corps, it was not my line. I had been an old Cavalry man for many years, and it didn't seem hardly the thing I should leave my family and go into something I did not know anything about. When I began to inquire in it, I found he wanted me to go in connection with this spruce work in the Northwest, and it didn't seem to me as though I was exactly fitted for that. I didn't know much about the lumber business, although I was born in a lumber State, Michigan, and had more or less to do with it in one way and another, but from a practical standpoint, I did not know anything about the lumber business, so I declined at that time. I did not feel right about it, because I felt I ought to do anything I was called upon to do, and so later on, in the spring of 1918, I think in February, before the spring, I met Gen. Disque on his way east.

Mr. FREAR. He was a general then?

Mr. MORLEY. At that time he was a colonel. He had been in Cleveland when he was in the Regular Army overseeing the work of the National Guard Cavalry, and in that way had known about me, and perhaps that is the way I had become known to him.

Mr. FREAR. What was your position in the guard?

Mr. MORLEY. In the National Guard, in the Spanish-American War, in the Ohio Cavalry, and I met Gen. Disque, and he again urged me to come out. He said he was desirous of having men who not only had military experience, but also experience in business matters, and on whose judgment he could rely, and he was very anxious to have me come out and so I said I would. Eventually a commission was issued; there was a great deal of delay about it, because those matters are slow in Washington, as everyone knows; for several months I was up in the air, between hay and grass, not knowing when I would be ordered in the service. I had my own affairs, which were perhaps of some importance.

Mr. FREAR. You are a practicing lawyer in Cleveland?

Mr. MORLEY. Yes, sir. I didn't know what he wanted me to do was to look after their legal matters.

Mr. FREAR. Did the Secretary of War have anything to do with it?

Mr. MORLEY. Nothing, whatsoever, to do with it.

Mr. FREAR. I was wondering if he had recommended it?

Mr. MORLEY. No. I know Mr. Baker, as other citizens in Cleveland do. I am a Republican, however, and not a Democrat.

Mr. FREAR. Your politics are what, Maj. Sligh?

Maj. SLIGH. They have been a little mixed; I was a Republican and then a Democrat, and I am a Roosevelt Republican now.

Mr. MORLEY. I only made that reference to my connection with this enterprise in order to obviate any impression that I was an employee; of course, as an employee I was an officer in the Army, and commissioned, and ordered to report at the Vancouver Barracks to the commanding officer, and I did so on the first week of July, 1918, and when I reported there I was assigned to duty as manager of the

legal department, much to my disappointment, finding I had to continue in the practice of law. I continued as manager of the legal department throughout my connection with the Spruce Production Division, although after the Spruce Production Corporation was organized and took over the functions of the War Department there, I, like other officers, was assigned to duty with that corporation, and acted as its legal counsel until I was discharged, some time in March.

Mr. FREAR. Of 1917?

Mr. MORLEY. 1917.

Mr. FREAR. Then you were connected out there about seven or eight months, July to March.

Mr. MORLEY. Well, late in March. It is very difficult for me to know what the committee wants to know about.

Mr. FREAR. What was the character of your duties? Did you pass upon contracts?

Mr. MORLEY. I drew the contracts for the real estate, made contracts, had charge of procuring the rights of way for railroads, gave general legal advice on all questions that came up; had to do with the bringing of suits when it became necessary to condemn property in some instances, and I was on the staff of the commanding officer and was called in conference with him on many questions on which he wanted my judgment from a business standpoint, as well as legal standpoint, and so with all the other heads of the department, I met with them and consulted with them as a lawyer does, in these days, when a lawyer is as much a business man as a trial lawyer.

Mr. FREAR. Did you have any assistance on the attorneys' staff?

Mr. MORLEY. Yes. I was called upon to reorganize the legal department. In the first instance they had none; Capt. Cookingham I think he was promoted to a captaincy when I got there, a local Portland lawyer, had been acting as contracting officer for the division out there, preparing contracts, and gave some legal advice, but the legal phase of things had broadened extremely, as it does in any big industrial enterprise, and they needed a larger organization, and perhaps a man with more experience than Cookingham had, and I organized that department, of which Cookingham was one, and there was perhaps five or six commissioned officers, lawyers, who were in my department, and acted as assistants to me, as well as some enlisted men, clerks, and that sort of thing.

Mr. FREAR. What was the nature of your duties outside of what you have stated; was there anything outside of the office proper you were required to do; and if so, what?

Mr. MORLEY. As a general adviser. Of course there were innumerable things coming up in connection with all sorts of problems, as you know, and I was busy all day long, and at night as well.

Mr. FREAR. I presume there is no doubt but what you earned your salary as a major?

Mr. MORLEY. We had no judge advocate, because we were not a tactical division, and ordinarily many problems that would have been handled by that division were handled by me.

Mr. FREAR. Did you have anything to do with courts-martial?

Mr. MORLEY. No; except I looked over the testimony and gave some advice in regard to some matters, but I had nothing to do with those matters.

Mr. FREAR. I am asking you this purely for information: Did you know of the case of a man named Davies; do you know anything about that case?

Mr. MORLEY. Yes, sir.

Mr. FREAR. Will you please give us your interpretation of it, because we have no information, except as it has come through the press.

Mr. MORLEY. I have nothing to do with that case, and only knew about it in so far as I saw something about it in the papers.

Mr. FREAR. I thought you had something officially to do in passing upon the record?

Mr. MORLEY. I can tell the committee, if it desires, in a general way, of my understanding of what that matter was.

Mr. FREAR. We will be glad to get it.

Mr. MORLEY. Some rumors have been brought to the commanding officer, Gen. Disque—he may have been a colonel at that time, I do not recall—that charges of grafting had been made against, I believe, the Warren Spruce Co., some of its employees, in connection with the work that the Warren Spruce Co. was doing in connection with the Spruce Production Division, and the matter was referred to the Intelligence Department to run down and see whether there was any truth in it, any foundation for those rumors, and the officer in charge of the intelligence department, among others, I don't know how many were sent down or had anything to do with running down those rumors, but among others, this man Davies, who was an enlisted man, taken into the Intelligence Department, and sent down there to Newport, I think, where the headquarters of the Warren Spruce Co. were, to investigate into the truth of those rumors. The young man apparently seems to have acted in an indiscreet way, in telling a number of people what he was down there for instead of keeping under cover what he was doing, as an intelligence man should, or detective, and furthermore, instead of running down these charges, and getting information about them, he began to make a number of statements or charges himself, about various people, and made statements with reference to some officers.

Mr. FREAR. That is statements derogatory?

Mr. MORLEY. Yes, sir.

Mr. FREAR. Charging them with malfeasance, anything of that character?

Mr. MORLEY. I don't recall now what statements he is said to have made. At any rate, his usefulness was at an end, apparently, as an investigator.

Mr. FREAR. Let me ask at that point: Did he make any report?

Mr. MORLEY. I do not think he got to that point. When it was found he was going around making these statements about some people, and it became generally known what he was there for, and his conduct was brought to the attention of his superiors, some charges were filed against him, and he was tried by court-martial. What ultimately became of the trial, I do not know. I think in the first instance he was convicted, but whether there was any further review of the case, I do not know.

Mr. FREAR. Whether rightly or not, as he was in the Intelligence Department, and assuming he was there to make study of the conditions, whether he construed his duties rightly or wrongly I suppose

is a matter to be determined, but he was in that employment and engaged in that duty, wasn't he?

Mr. MORLEY. As an investigator.

Mr. FREAR. As an investigator of the Intelligence Department?

Mr. MORLEY. Yes, sir.

Mr. FREAR. Then he was tried by court-martial, convicted, and sentenced to imprisonment, and the sentence was waived or annulled, as I understand. Is that right.

Mr. MORLEY. That I do not recall. Of course, the Spruce Production Division, as a division, had nothing to do with it; the court-martial matters were in the hands of the Western Department.

Mr. FREAR. I understood you to say you looked over court-martial matters; they just came to my attention as you spoke; I had forgotten about it myself. Were you familiar with the different interests, around throughout Washington and Oregon, and if so, to what extent?

Mr. MORLEY. I think I got to be familiar with the situation pretty well.

Mr. FREAR. Did you travel around any?

Mr. MORLEY. I did some traveling, but of course, most of these men came into Portland who had business with the division, and I had to do with matters of contract, and various questions that were arising frequently; of course, I had daily meetings with members of the staff, and I think I got to know the situation pretty well out there, and if there is anything that you want my opinion about, anything that I can enlighten the committee on, as to the result of what was done, I will be glad to do it.

Mr. FREAR. Did you have anything to do with the Simms-Carey contract?

Mr. MORLEY. No; I did not.

Mr. FREAR. That was the contract for building the railway from Lake Crescent to Lake Pleasant.

Mr. MORLEY. Yes, sir. Of course, the railroad was not just merely from Lake Crescent to Lake Pleasant; it also extended from the branch of the Chicago, Milwaukee & St. Paul over to Lake Pleasant.

Mr. FREAR. How far is that?

Mr. MORLEY. I do not recall the number of miles; I should think 12 or 15 miles, anyway.

Mr. FREAR. The testimony is that there were 38 miles of railway, that was the length of the railway, and as it ran from 30 to 40 miles before it struck this place; you are familiar with the Ray investigation?

Mr. MORLEY. Yes; I had a number of talks with him.

Mr. FREAR. That is his finding, that it was 38 miles, cost \$3,800,000; it probably cost more than that.

Mr. MORLEY. You asked me in the first instance about the contract itself?

Mr. FREAR. Yes.

Mr. MORLEY. The contract itself was made in Washington, and made before I got out to the coast.

Mr. FREAR. Yes; it was made on May 20, I believe.

Mr. MORLEY. Most of our contracts were made at our headquarters in Portland, signed by a contracting officer for the division and sent

on to Washington for formal approval, but that contract was made directly in Washington. My understanding about it is this: That although the Simms-Carey people had originally come to Gen. Disque, and some negotiation had been on foot with respect to their opening up the so-called Olympic tract of timber, that they switched their negotiation to Washington, and the matter of the contract was concluded directly there, between the Simms-Carey people and their attorneys, and the War Department.

Mr. FREAR. Do you know how it came about that the Simms-Carey Co., that had never had any previous experience in the cutting of spruce, so far as the record goes, were given that contract? A contract for \$25,000,000?

Mr. MORLEY. I don't know how it came about, except from their reputation as efficient contractors.

Mr. FREAR. But they had never had anything to do with the spruce contracts, or logging propositions, but they were given a contract for \$25,000,000 for cutting of spruce, that is, for 250,000,000 feet; at first Disque's proposition was 500,000,000 feet, but when he submitted it to the loggers there was subsequently a contract to produce 250,000,000 feet; do you know how they came to secure that contract, through what influence?

Mr. MORLEY. I do not know through what influence. Of course, that assumes that there was some influence.

Mr. FREAR. Unquestionably.

Mr. MORLEY. Of improper influence.

Mr. FREAR. That is not so necessarily true. What brought this company to the attention of Maj. (or Gen.) Disque so that he gave them a contract of \$25,000,000, a contract to this company that had no previous experience? I am reciting what is shown by ray.

Mr. MORLEY. The general did not give the contract to them. The contract was made in Washington. They, as contractors, my understanding is, originally came to Gen. Disque, who was very desirous of having that Olympic tract opened up, as it was one of the large tracts of undeveloped spruce.

Mr. FREAR. How much spruce was in that tract, do you know?

Mr. MORLEY. I could not tell you without reference to the figures, but it was a very large body of spruce that lay in this Olympic district, of course, under divers ownership, but it was considered to be very fine spruce; that is, timber which ran very high in spruce, a very excellent quality of spruce, and looking to the future, to the ability of our division to meet the ever-increasing requirements of the United States, and the Allies for the production of spruce, it seemed highly desirable that that great body of spruce should be opened up and made available, and so the General was anxious to have somebody do it, and a great many plans had been brought to his attention, no doubt, by various people, about it, and he had endeavored to interest a great many people and get them to do it, and finally the Simms-Carey people came along, and said they would do it, and he at that time started negotiations about it, and then the matter was taken up in Washington and the contract and its terms worked out in Washington.

Mr. FREAR. The Simms-Carey Co. was not a company doing business in Washington or Oregon.

Mr. MORLEY. No.

Mr. FREAR. They were a New York corporation.

Mr. MORLEY. They were a corporation, I think, that was organized for this particular matter. Two of the members of the firm had been contractors with large experience.

Mr. FREAR. Contractors for what?

Mr. MORLEY. I think very largely in large public works, railroads, and that sort of thing.

Mr. FREAR. They had nothing to do with spruce work.

Mr. MORLEY. Not as far as I know.

Mr. FREAR. You say you don't know how much spruce——

Mr. MORLEY. I can readily get the figures.

Mr. FREAR. I wanted to find out what your estimate is. I want to find out how it compared with other experts, with Government experts. You know about the Cunalit Reservation that is at Grays Harbor?

Mr. MORLEY. Yes, sir.

Mr. FREAR. How near to Gray's Harbor?

Mr. MORLEY. I do not know the distance.

Mr. FREAR. Not over 25 miles.

Mr. MORLEY. I do not know the distance.

Mr. FREAR. Very accessible, was it; no mountains to climb? That was the Paulsen proposition, the Paulsen railroad, and the Paulsen tract?

Mr. MORLEY. I don't want to give you information of a technical character of this sort. I do not think I would be qualified to tell you the conditions in that territory, how hilly, or what not. I am very sure that anyone out on the coast who knows will tell you that the amount of the available timber, spruce in the Olympic district would far exceed anything in the Quinault Reservation; of course, that is one of the sources of supply that would make available.

Mr. FREAR. That is out on the peninsula, this timber you are speaking about, this timber to be struck by the extension of the Milwaukee Railway; that is a long ways from either the sound or the ocean.

Mr. MORLEY. I took a railroad of somewhere in the neighborhood of 40 miles long to get into it.

Mr. FREAR. Have you ever been out there where the railroad was built?

Mr. MORLEY. Yes; I have been over it.

Mr. FREAR. What do you think of it?

Mr. MORLEY. I am not an engineer, but it looked to me like a finely built railroad.

Mr. FREAR. It ought to be, costing over \$100,000 a mile.

Mr. MORLEY. It was not entirely completed; part of it had not been ballasted, but a large part of it had.

Mr. FREAR. It had tunnels, did it?

Mr. MORLEY. It had a good deal of rock cutting; there may have been some tunnels in it.

Mr. FREAR. Do you know of any other railroad, in your whole experience in life, that has been built as a logging railroad, where they built tunnels, a railroad that cost anywhere, approximately, \$100,000 a mile?

Mr. MORLEY. No; I do not know of any logging railroad that cost that much, but this was not built as the ordinary logging railroad.

it was built to bring out these enormous quantities of material and tap a very large district, and I think was intended to be built in a way which would be of value, and not simply a logging road.

Mr. FREAR. Be of value to whom?

Mr. MORLEY. To the Government, ultimately.

Mr. FREAR. But the Government was going to sell this road after it had been used to bring out the timber. Surely they did not expect to bring out timber for an indefinite length of time. The war was expected to be over in about a year or so after the signing of the armistice. At least that was the statement of Secretary Baker. That was assumed at any rate, although it was a surprise it occurred as quickly as it did. What was the purpose of building a road of this kind at that place and of that character? Can you tell the committee?

Mr. MORLEY. The railroad was built to carry a very large traffic, and I suppose it would have to be built very much better than the ordinary logging railroad, such as ordinary enterprises would build, simply to extend into some timber. This was opening up a very large area of timber, that would take a great many years to ultimately log, I suppose, and the railroad necessarily had to be built to carry a heavy traffic, and inasmuch as the traffic which we would send over it in the development of that timber would be exceedingly great, it had to be built so it would carry that.

Mr. FREAR. Are you familiar with the Siletz country?

Mr. MORLEY. I am not familiar with it as a practical man, no.

Mr. FREAR. Was there any more timber in this country than there was in the Siletz reservation?

Mr. MORLEY. I would say so.

Mr. FREAR. You would say so? Do you know anything about it?

Mr. MORLEY. Well—

Mr. FREAR. Have you ever been in the Siletz country?

Mr. MORLEY. Yes; I have been up from—

Mr. FREAR. Whereabouts?

Mr. MORLEY. Up from Toledo.

Mr. FREAR. How far did you go up?

Mr. MORLEY. Not very many miles, just where we were logging.

Mr. FREAR. Up to Siletz?

Mr. MORLEY. No, just a few miles beyond Toledo.

Mr. FREAR. Siletz is only 10 or 12 miles?

Mr. MORLEY. I never got right up in the midst of the timber.

Mr. FREAR. You have not been in the timber?

Mr. MORLEY. I have been in some timber, but I am not purporting to be an expert on timber.

Mr. FREAR. I am trying to find out what your knowledge is in comparison of the two tracts. This was an ordinary logging road to be built up to the Siletz, just an ordinary steam logging road that you would find in the State of Michigan, but to accommodate the largest sized timber, as large as can be found in any part of the peninsula, because the largest trees to grow on the Siletz reservation—

Mr. MORLEY. They are very large trees, I don't know as they run as large as the Olympic.

Mr. FREAR. I have seen 9 and 10 feet in diameter there myself. Those are as large trees as would probably be manufactured?

Mr. MORLEY. That would be a large tree, but not as far as they go.

Mr. FREAR. But as large presumably, as would be used for commercial purposes so far as your knowledge goes, that is true, isn't it, compared with the two districts?

Mr. MORLEY. Now, what are you asking me, whether the spruce, or whether—

Mr. FREAR. No; larger trees. You are referring as I understood, to the size of the trees and the traffic?

Mr. MORLEY. No; to the volume of it.

Mr. FREAR. Oh, then, is there any more timber in this section that was to be tapped by the Milwaukee, where your extension was more than there was in the Siletz section which takes—

Mr. MORLEY. I suppose so.

Mr. FREAR. You don't know anything about that, that is a question for us to ascertain later on?

Mr. MORLEY. I think you can find that out.

Mr. FREAR. The railroad that was built from Toledo, north, from Quinalt Bay there, the junction, that is an ordinary railroad, isn't it, just an ordinary logging railroad? Of course, up to Toledo you have the extension of the Southern Pacific, but from that point on, for the purposes of logging, it is just an ordinary logging railroad!

Mr. MORLEY. I should say not, I should say the Northern was built as a regular railroad.

Mr. FREAR. As a regular railroad?

Mr. MORLEY. Yes.

Mr. FREAR. That is, for the purposes of logging, getting these logs out?

Mr. MORLEY. I think that was built as a regular railroad.

Mr. FREAR. To be a permanent railroad?

Mr. MORLEY. Yes.

Mr. FREAR. What was the purpose of that?

Mr. MORLEY. Because it opened up a very large amount of timber up in there, and it was expected that that railroad would be valuable, that the Government could ultimately dispose of it.

Mr. FREAR. But a very extensive railroad of \$100,000 a mile, who would buy it? Who would be able to buy it outside of the Southern Pacific, so far as the Newberg section goes, the two roads at Newberg in the north, and the Milwaukee road?

Mr. MORLEY. Well, now, I have not the figures before me, and I can not tell you what the comparative cost was, what the Quinalt Northern cost it, it had not anywhere reached the stage of completion as the other road had.

Mr. FREAR. Do you know anything about how the Warren Spruce Co. got that contract instead of the Portland Construction Co.?

Mr. MORLEY. No.

Mr. FREAR. Do you recollect, or was your attention called to the correspondence of any of the efforts of the local company to get it when the Warren Spruce Co. came in?

Mr. MORLEY. No.

Mr. FREAR. The Warren Spruce Co. was an offshoot of the Warren Construction Co., wasn't it?

Mr. MORLEY. I have understood that.

Mr. FREAR. You have seen all those contracts?

Mr. MORLEY. The men who were interested in forming the Warren Spruce Co. were men who had been interested in the Warren Construction Co.?

Mr. FREAR. Yes. The Warren Construction Co. was not composed of men who had had any experience in logging, was it, so far as you know?

Mr. MORLEY. The men who did the actual work for them were experienced loggers.

Mr. FREAR. Oh, yes; they employed men, but the men who got the contract, or the Warren Construction Co. who got the contract, the same as the Simms Carrier Kirbaugh Co., or any other company was not composed of experienced loggers, or men who had had any experience whatever, that is the Warren Construction Co. was an eastern company, was it not?

Mr. MORLEY. No; they were doing business out on the coast.

Mr. FREAR. They were doing some business there in paving lines?

Mr. MORLEY. Yes.

Mr. FREAR. How did they get their contract, do you know that?

Mr. MORLEY. That I don't know.

Mr. FREAR. Did that come from the East, or do you know?

Mr. MORLEY. I think not. I think it was made out there. I think they simply stepped to the front and said they were willing to take that contract, and it was very difficult to get people to make a contract of that sort. They had a large organization that was available for contracting purposes.

Mr. FREAR. What was their organization outside of—so far as you know, they were not a railroad-construction company?

Mr. MORLEY. I don't know whether they had ever built railroads or not, but I think they had.

Mr. FREAR. Where, or do you know?

Mr. MORLEY. I don't know. They had, from my observation, a very efficient organization that did very efficient and effective work.

Mr. FREAR. You mean as to their contracts that they performed?

Mr. MORLEY. Under their contract with the Government.

Mr. FREAR. That is, you are satisfied that their cost-plus contracts were conducted fairly and justly from the Government standpoint?

Mr. MORLEY. From my observation we got the best results. Now, I don't want to draw comparisons as between the three principal cost-plus contractors that were directly under the supervision of our division out there, those three, with the Warren Spruce Co., the Grant Smith Co., and the aeroplane company.

Mr. FREAR. Those were the three in Oregon?

Mr. MORLEY. Those were the three.

Mr. FREAR. Of course you had the contract with Paulsen & Simms; those were from Washington?

Mr. MORLEY. The Paulsen is the Aeroplane Spruce Co.

Mr. FREAR. Oh, that is the Aeroplane Spruce Co.?

Mr. MORLEY. Yes.

Mr. FREAR. Then you had two in which Porter Bros. were operating in Oregon, were they?

Mr. MORLEY. The district was divided between those three cost-plus contracts. The most northerly was the Aeroplane Spruce. Then intermediate comes the branch Smith Porter. The southern operations were taken by the Warren Spruce.

Mr. FREAR. And the Symmes Kirbaugh Spruce Co., that was a specific contract?

Mr. MORLEY. Yes.

Mr. FREAR. Not the cost plus, except as for the railroad?

Mr. MORLEY. That was handled as such for this reason, inasmuch as the contract had these features. The contract provided, in the first instance—speaking of the contract I mean the spruce contract as distinguished from the railroad contract—the spruce contract provided in general terms, a practical guaranty on the part of the Government, to give the Simms Carrier Kribaugh Co. cost plus 7 per cent; that is, if they were not making that much, they had a right to say this contract would go on a cost-plus basis; for that reason it was controlled as a cost-plus contract and supervised accordingly.

Mr. FREAR. But the Simms Carrier Kirbaugh Co. expected to make 20 per cent, as you probably know, or do you know?

Mr. MORLEY. The contract provided that they could not make to exceed 15 per cent. The Government had the right to an accounting, and they were obliged under their contract to refund anything over 15 per cent.

Mr. FREAR. Over 15?

Mr. MORLEY. Yes.

Mr. FREAR. Well, I asked you the question a few moments ago—I don't know just what your opportunities for observation were—do you say that the Warren Spruce Co. in its operations under this cost-plus contract did satisfactory work to the office of Portland, Oreg.?

Mr. MORLEY. Yes, sir.

Mr. FREAR. That is, you people were satisfied with it?

Mr. MORLEY. Yes.

Mr. FREAR. So that no matter what our experience or understanding is, after our investigation——

Mr. MORLEY. I mean we were satisfied with it to this extent. It seemed to me, from all my observations, that they were more effective in handling the operation than the others, perhaps that is——

Mr. FREAR. Was that the judgment——

Mr. MORLEY. Making some invidious distinctions, because I think the Grant Smith Porter people did well, but I believe that if the accounts were analyzed you would probably find that the Warren Spruce Co. were ultimately producing more spruce, and perhaps on the whole at less expense, than any others.

Mr. FREAR. That was one of the companies that Davis was investigating, wasn't it?

Mr. MORLEY. Yes.

Mr. FREAR. I assumed he was.

Mr. MORLEY. We had, as to all those contracts, the three of those contracts, a supervisor of course on the ground, aside from our Portland office, what we called a district manager, district supervisor, who passed on everything, and generally supervised the operation of the contract.

Mr. FREAR. Do you know, you were in close association, you sat with Gen. Disque as he was there part of the time?

Mr. MORLEY. Yes.

Mr. FREAR. Do you say that he was perfectly satisfied with the performances by the Warren Spruce Co.?

Mr. MORLEY. No, I don't think so.

Mr. FREAR. You do not think so?

Mr. MORLEY. I do not think anyone was perfectly satisfied with the work done out there, there were mistakes occurred, a good many, no doubt, and the work, on account of its very nature, and the very character of it, and the speed with which it had to be done, was very costly, and we were not, any of us, satisfied, of course.

Mr. FREAR. But you say that they were in your judgment, they were better than the other two; that is, I mean they reached nearer the expectations than the other two companies, than the aeroplane, or the Porter Bros. Co.? I am asking this purely for the inquiry, because I am not familiar with the comparison.

Mr. MORLEY. Well, now, that is perhaps not quite right for me to say that, because I would not want to draw that distinction between them and the Grant Smith Porter Bros. Co., but from my observation of them, the Warren Construction Co. were efficient contractors under the circumstances that existed out there.

Mr. FREAR. Do you know how many railways were built out there, or under construction?

Mr. MORLEY. Well, we had, as I recall it, 13 railways.

Mr. FREAR. Thirteen different railways?

Mr. MORLEY. Thirteen different railways.

Mr. FREAR. Where were they, please, so far as you remember?

Mr. MORLEY. Well, there was the Quinault Southern Railway——

Mr. FREAR. That ran down to the Blodgett contract?

Mr. MORLEY. That ran down to the Blodgett contract.

Mr. FREAR. That was about 25 miles long, I think.

Mr. MORLEY. Twenty-five or thirty. And the Quinalt & Northern which ran north from there——

Mr. FREAR. That was about what, 10 miles long at the time?

Mr. MORLEY. As laid out, of course, it was considerably longer than that, I can't recall the amount that had been completed. It was projected for a little farther distance than that. The North Enema, the little railroad that ran north from Toledo——

Mr. FREAR. Just a moment; what is the difference between the railroad that ran north of Toledo and the railroad that ran up from Quinault Bay? I was wondering whether two railroads running there——

Mr. MORLEY. The Quinault & Northern ran along the coast, and the one that ran north from Toledo was farther in the interior.

Mr. FREAR. Farther in the interior, well, Toledo is east of Quinault Bay?

Mr. MORLEY. Yes.

Mr. FREAR. So it couldn't run into the interior, run farther north into the interior, couldn't run farther east?

Mr. MORLEY. I mean as it ran up it was farther from the coast.

Mr. FREAR. You mean the Quinault Bay was farther than Toledo?

Mr. MORLEY. No; just the opposite.

Mr. FREAR. Yes, I understand; Toledo was east of Quinault Bay?

Mr. MORLEY. Yes.

Mr. FREAR. And the Toledo road was the one that ran east. Did they use that old logging road?

Mr. MORLEY. Yes; there was an old logging road; it was improved and extended, a connection built down to the slough at Toledo.

Mr. FREAR. Yes. Then, there was the Simms Carrier Road.

Mr. MORLEY. Yes.

Mr. FREAR. What other roads?

Mr. MORLEY. There was the road, so-called Paulson Road, that was built——

Mr. FREAR. That didn't run very far, did it? I mean, met with a good many troubles, discouragements, didn't get very far?

Mr. MORLEY. Just offhand, it is sometime since I was there, although I have had maps of all those in my office, I would not want to tell you the route of each one; you can get all that information out there.

Mr. FREAR. My judgment on that is based on the rail report and what other information I had. What other roads are there that you can remember?

Mr. MORLEY. If I had my maps I could tell you, but it is so easy for you to get that information——

Mr. FREAR. Surely. Those were small roads.

Mr. MORLEY. Small roads; yes.

Mr. FREAR. You had to do with getting the rights of way?

Mr. MORLEY. On those that were built on our own right of way, and there were all sorts of questions that came up with reference to the——

Mr. FREAR. What kind of contracts were made with the different roads—different kinds?

Mr. MORLEY. For those we acquired the right of way we took in the first instance, which later we covered by conveyances of the rights of way——

Mr. FREAR. Then, you had, I suppose, connecting roads or short roads, or short branches, that would connect with these various roads. were there not?

Mr. MORLEY. By that you mean the Spruce Co.?

Mr. FREAR. Spruce.

Mr. MORLEY. Yes.

Mr. FREAR. Those ran—to what extent would be the longest, in your judgment, as you recollect from your work and your experience?

Mr. MORLEY. I would rather not go into that detail. You can get it from a definite source, and it is just taking up your time for me to give you that sort of information.

Mr. FREAR. Yes; I thought maybe we could get that in advance because people have a very indefinite understanding. Now, is there anything that occurs to you particularly that you would like to speak to the committee about, that you can give us any information about or desire to?

Mr. MORLEY. It seems to me that your committee ought to get this accurate information which would give you details of the cost and expert opinion in regard to the method and means employed, all that sort of thing, from men who were actually familiar with those operations. While you were in the East here, it seems to me you ought to have called Col. Breeze, who is a man of very extraordinary knowledge, in my opinion.

Mr. FREAR. He is where, Washington—Charleston, W. Va.?

Mr. MORLEY. Yes.

Mr. FREAR. Yes.

Mr. MORLEY. I think you ought to hear Col. Hitchcock.

Mr. FREAR. He is out there.

Mr. MORLEY. No; Col. Hitchcock is in Cleveland, and from what has been said here about Col. Hitchcock, he is a very patriotic man, he made sacrifices in going out to the coast, he was simply a man who had had military experience, an Army man, and the commission had known of his old Army experience and got him to come out there, and the colonel went out there—he was a captain to start with, then major, then lieutenant colonel, but worked very hard, and he can tell you his side of many things that have been said about it.

Mr. FREAR. Now, I will just ask you if you will be sure to remind Col. Hitchcock that the committee will be glad to hear from him on our return. I speak of this because it is very difficult for us to remember all these parties, and we certainly want to have all the light we can get from him and everyone else, and if you will do that as a personal matter, so long as you are in the same town, we shall appreciate it. I supposed he was out there, and expected to call him out in Portland.

Mr. MORLEY. There are some things, in view of what I have heard here, and from Maj. Sligh, who has testified to what occurs to me as running through the committee's mind that I ought to speak of before I leave.

Mr. FREAR. Now, I think this is proper. Of course when you started, you started with an estimate of Col. Sligh's testimony, which I felt was the province of the committee, and no one else, but if you have anything to state in regard to any particular facts, of course the committee would be glad to get it, just the same as if you were trying a law suit yourself. We want to get the information you can give to us, and we will form the best judgment we can. At this time we are desirous of getting it before we start to the coast, because there is an infinite variety of matters to come up, and our time is necessarily limited, and anything we can get at this time would be enlightening.

Mr. MORLEY. Of course, when I first went out there I knew nothing at all about the enterprise, had heard nothing about it at all, went out there absolutely ignorant of it, but just as speedily as I could I informed myself as well as I could about all the matters then in progress, so I could give adequate advice. I was in pretty close touch with things, and I think I formed a pretty fair opinion of the enterprise. If you want to hear me say something about it, I will.

Mr. MAGEE. Now, I am going to suggest, the committee is not interested in personalities, we are only interested in facts, but if there are any further facts, which you have in mind which you think will be of benefit to the committee, we would like to have them, with reference to the attempt of the Government to get spruce on the coast.

Mr. MORLEY. Of course, so far as you wanting only facts is concerned, I gather the impression from listening to Maj. Sligh's testimony that you were listening to opinions as well, general statements of opinion.

Mr. MAGEE. I do not understand that that is the purpose of the committee; as I understand, the committee is after the facts.

Mr. LEA. Of course, we have received a good many expressions of opinion from men who did not know the facts, and suggesting what might be found out. Of course, I think, to some extent, Maj. Sligh testified that way.

Mr. MAGEE. The witnesses have been given considerable latitude in relating to what they profess to know about the situation, but the committee is not interested in personalities. Its work, so far as it can perform it, is to endeavor to get the facts of the situation.

Mr. MORLEY. Well, I understand the facts with respect to the enterprise generally out there, but of course, so far as it pertains to a period prior to my connection with it, it is a matter of opinion which I derived from my observation while I was there and from my association and intercourse with men on the coast who were identified with it, and were—and knew about it.

Mr. MAGEE. Well, do you know whether or not the Government obtained any spruce from the Olympic Park?

Mr. MORLEY. No.

Mr. MAGEE. As the result of building this railroad by Smith Carried Kirbaugh Co.?

Mr. MORLEY. They did not. But if I can be permitted to proceed with that preliminary statement that what I am testifying to in regard to the conditions prior to my arrival there, is simply the result of my observation in seeing the situation as it was when I got there, and my talk with the men who were there—of course I was not there, so I can not testify as a witness might in court, from actual observation, of the particular fact in question, but I—

Mr. MAGEE. The way I view it is, something you may have heard some one else say. Of course you are a lawyer and I am a lawyer and what you may have heard some one else say is merely hearsay and would not be testimony relative to a fact. Now, what we would like to get are the facts. We assume that we can get them. You spoke something about the Chicago, Milwaukee & St. Paul Railroad being extended some 12 or 14 miles; was that an extension independent of the 38 miles of road to the Olympus area—

Mr. MORLEY. No.

Mr. MAGEE. Or was it part of that 38 miles?

Mr. MORLEY. It was part of these 38 miles, I would not say the exact distance, but may I proceed along with a sort of a narrative which I understand you really want, to get my views about the situation out there.

Mr. MAGEE. Yes; but all I want to say, you started off with a severe criticism, personalities against Maj. Sligh; the committee is not interested in these personalities at all; what we are interested in is getting the facts, and we want only the facts, because we have been authorized to investigate and get the facts and report them to the House, and I assume the committee is not interested in personalities at all. That is true?

Mr. MORLEY. I didn't suppose it was.

Mr. LEA. Yes; that is true. Of course, I would think if you have anything—any facts within your knowledge that should lead us to form a contrary opinion from what you have resulting from the other gentleman's testimony, I would be glad to hear it.

Mr. MORLEY. All that I was prefacing this by, would you like me to go ahead with a narrative as to what I saw and observed out there, and the conclusions I reached about the enterprise in a general way, without simply responding to any particular question?

Mr. MAGEE. Any fact based on your observation that you know about with reference to the situation there the committee would be

glad to hear. I think that covers it as nearly as I can say. In other words, the members of this committee do not feel prejudiced in this matter either one way or the other; their minds are open and the only desire, so far as I know, of the entire committee is to get the actual facts in the premises in order that they may report these facts to the House and to the country

Mr. MORLEY. When Gen. Disque was sent out to the Pacific coast, he took charge of the Government program in connection with the production of spruce.

Mr. MAGEE. That was about when, as nearly as you can tell?

Mr. MORLEY. I think he came out and made the preliminary survey of the situation in October, 1917. At that time neither the United States nor the Allies were getting the spruce that was required for the aeroplane program. The spruce that they were getting, so far as my knowledge of the thing is concerned, and this, I have gained from talking with the men who were engaged in the spruce business out there, was what was called G list spruce, and that was a very unsatisfactory article, and they were getting a lot of that, and with the aeroplane program being so vital as it was, of course it became essential to very materially increase that production both in quantity and in quality, and the Army, originally through the Signal Corps undertook to do that. Of course the labor situation is serious as you all know out there. It has been said that the Government might have undertaken to hold that labor situation, counteract that by simply using troops as a guard, police to protect the labor, which might have meant serious conflict possibly out there. Of course those questions are political somewhat, but it was a question of judgment as to whether that was the proper thing to do, and apparently the War Department and administration thought not. I am not here to pass in judgment upon that, but at any rate, if that was not the program to use the military to overawe the labor out there and keep it in control, some other program was necessary, and that was the program that Gen. Disque undertook so far as handling labor was concerned, and as a result of that, the Loyal Legion of Loggers and Lumbermen was formed which controlled the situation out there in a peaceful way, and enabled production on a large scale to go forward, and from my observation I think that was a wonderful piece of work, fine piece of work, for which Gen. Disque ought to have credit.

Something has been said here in testimony in regard to paying soldiers the civilian wage. There are a great many ways to look at that question. It appeared to be necessary in order to increase the production to send a large number of soldiers out there and have them work in the woods and in the sawmills and work alongside of civilians in many instances. There again was a question of policy as to what to do, whether to use soldiers and simply give them the soldier pay, have them working alongside of men who were getting civilian wage, as to whether that would seriously disorganize labor conditions out there, which of course was important. The authorities in Washington evidently considered that it was the better policy to pay the soldiers when they were working in and alongside of civilian operations the civilian wage, and I want to say just this for the soldiers that were out there—of course there may be exceptions to this—but I think that as a whole the soldiers all want to see active

service, all wanted to go to France and would have much preferred actual military service in the fighting line or any kind of military service in France to the service they were doing there, although they were getting civilian wage. Of course in their work in the mill and lumber camps they had to have additional money in order to equip themselves and buy the kind of clothing that they needed, kind of shoes, everything of that kind, and if they had not had that additional wage the Government would have had to furnish that additional equipment to them. Complications would have also arisen with respect to their being fed. They had to be fed along with the other men and that would have meant an additional payment.

Mr. MAGEE. Why were they put in there at this occupation?

Mr. MORLEY. Beg your pardon?

Mr. MAGEE. Why were they placed in there at this occupation. do you know?

Mr. MORLEY. Because they had to have that additional amount of labor to carry out the work.

Mr. MAGEE. They could not get sufficient civilian labor?

Mr. MORLEY. They could not get sufficient civilian labor out there; they needed the additional labor that the soldiers brought out, and of course they are very much easier to handle, too; and now this should be remembered, there were not any 30,000 soldiers out there to begin with. It is talked of here as though the spruce production division had 30,000 men to handle right along. Of course that is not true. To start in with, there were very few, and they kept increasing, and when some men were needed they were sent on out, but it was only right at the end that the number of men ever got to the number of 30,000.

Mr. MAGEE. You mean the number of soldiers?

Mr. MORLEY. The number of soldiers. When I first went out there the number was very much less. I don't think there were many more than half that when I first got out there.

Mr. MAGEE. How many civilians were there employed there as compared with the number of soldiers?

Mr. MORLEY. You mean in the whole enterprise?

Mr. MAGEE. Yes; in the whole enterprise. You say the maximum you think was 30,000 soldiers?

Mr. MORLEY. Well, I should suppose in the lumber industry all through the Pacific coast there were over 100,000 workmen.

Mr. MAGEE. In the spruce situation?

Mr. MORLEY. No; just in the lumber industry generally. Of course there was an enormous amount of fir.

Mr. MAGEE. I mean employed by the War Department in getting out spruce. You say that you think finally the number of soldiers increased to 30,000?

Mr. MORLEY. Yes.

Mr. MAGEE. That is in the spruce situation?

Mr. MORLEY. Yes; that is offhand, yes.

Mr. MAGEE. Now, how many civilians would you say were employed by the Government in getting out spruce?

Mr. MORLEY. Of course, the Government did not employ them directly. You asked me how many men were employed in producing the material of Government purchase.

Mr. MAGEE. Through the spruce production division, and I assume later by the spruce production corporation.

Mr. MORLEY. The Government did not employ civilians except perhaps in a few instances here and there. The civilians working in the industry were working for private parties who were selling their material to the Government.

Mr. MAGEE. Were there any civilians there working for the Government or governmental agencies?

Mr. MORLEY. Very few.

Mr. MAGEE. So that those working under the Government then were practically all soldiers; is that right?

Mr. MORLEY. Yes; but you must remember that these soldiers were working for contractors and for private concerns, except in so far as they were in barracks at Vancouver. When the men first came out there they would get military training and were assembled in the cantonment at Vancouver and as they needed men they were sent out into the woods.

Mr. MAGEE. Working for private corporations?

Mr. MORLEY. Working for private corporations that had cost plus contracts and were practically Government agencies.

Mr. MAGEE. That is the 30,000 you referred to?

Mr. MORLEY. Yes.

Mr. MAGEE. Then were they exempted from military service by the Government and permitted to accept this private employment?

Mr. MORLEY. No, no; they were soldiers under military discipline, and soldiers of the United States, and got their soldier pay, and they were simply paid, in addition to that, an amount by the private contractor to make up the regular civilian wage.

Mr. MAGEE. That is, the private contractor paid for the difference between the civilian wage and the wage of the soldier that each received from the Government?

Mr. MORLEY. Yes; and then the private contractor paid to the United States the amount of the soldier pay, so that the contractor had to pay the regular going wage for the labor, and reimbursed the United States for the amount of soldier pay which they paid to the soldiers.

Mr. MAGEE. So the Government did not incur any expense?

Mr. MORLEY. No.

Mr. MAGEE. Did not incur any expense by reason of the soldiers working in getting out spruce there?

Mr. MORLEY. No, no; not except in so far as the soldiers were operating directly as soldiers. There was a distinction made, and a very difficult distinction to make, with respect to the soldiers who were working in production and therefore got the civilian wage and those who were strictly military and got the soldier pay. For example, all the men working at headquarters were all simply enlisted and got their regular soldier pay, and the men who were out in the field who were directly acting in the military capacity in connection with production, in connection with the various duties of the military units, simply drew their soldier pay. It was only where the men were engaged directly in production and were paid through a contractor or private individual, so that otherwise they would have come into competition with civilian labor that they were paid the regular civilian wage. Of course, they were working under circumstances

where their expenses were very much greater, and they needed that additional wage in order to support themselves.

Mr. MAGEE. Do you know whether the soldiers who worked in that way had any particular training or experience in getting out spruce?

Mr. MORLEY. Some of them had, some of them had not, but they very readily learned, and it was quite remarkable how proficient they got; but so far as the men were concerned they did not want to be there. They were obliged to be there, they were sent there simply as soldiers; it was part of their military routine and part of their duty that they had to be there, but they all wanted to be somewhere else, and I will never forget the scene on the floor at Vancouver Barracks when some 10,000 men were centered there and Mr. Ryan, who was then director of aircraft production, made the announcement that Secretary Baker assured him and his men that a regiment would be completely organized, speedily organized, from the division to go to France overseas, and just as soon as the men could be spared regiment after regiment would be, and there would be absolute assurance one regiment would be organized and sent over speedily, and such a cheer went up from these men; they were simply beside themselves with delight. One of the most difficult things we had was to keep up the morale both of officers and men who were out there doing that hard work, that drudgery, in the rain and mud working with all their might to keep them up to that work when they all wanted to be over in France as soldiers, so that from the soldier's standpoint the payment of civilian's wage was not any easy money, anything of that kind.

Mr. MAGEE. Your observation—

Mr. MORLEY. They preferred the other.

Mr. MAGEE. Was that they were those employed to meet the demands for labor, doing work?

Mr. MORLEY. Yes; they were needed out there, and it seemed to be desirable that when they came into conditions where their labor would be in direct competition with civilian labor that they ought to be paid the civilian wage.

Mr. MAGEE. Now, in getting out this spruce, what was done out there under your observation?

Mr. MORLEY. Now, I started in to say how the production was very meager originally.

Mr. MAGEE. You went out there when, Major?

Mr. MORLEY. I went out there the 1st of July.

Mr. MAGEE. Were they shipping any spruce or not at that time?

Mr. MORLEY. They were shipping at that time large quantities because we had not gotten under way, but originally before the Army went out there and took charge, and by the Army I mean the Army as it was ultimately organized, they were getting this G list stuff, that was simply sold and picked up by brokers, and the Allies and the United States were of course competing with each other for the spruce, and it was only the spruce that came out as a by-product from the general lumber production out there that was available. Of course it was a serious proposition as to what should be done to increase that production, and that was what Gen. Disque found when he went out there.

Mr. MAGEE. Was that G list lumber suitable for aircraft construction?

Mr. MORLEY. A very small percentage.

Mr. MAGEE. What percentage would you say?

Mr. MORLEY. I would say I do not suppose there was 10 per cent of the G list stuff—

Mr. MAGEE. Was that stuff being shipped to the east when you went out there?

Mr. MORLEY. Not when I went out there. Previous to that time I think, if your committee will examine into the complaints made from Grand Rapids factories and others, they were referring to the G list stuff being produced before the production got under way. That was shipped in meagre quantities, increasing in price right along, and at best it was available in small quantities, that is quantities that did not anywhere near come up to the demands.

Mr. MAGEE. Do you know when the shipping of that product east ceased?

Mr. MORLEY. I could not say just when it ceased.

Mr. MAGEE. About when?

Mr. MORLEY. Of course there was no doubt, quite a large amount of it shipped until our division got into the swing out there and got things going. Now, the Army went out there with a very large program ahead of it, a program to enormously increase the production of spruce and also to produce a quality of spruce which would be satisfactory and not this inferior G list stuff that they had been buying in the past. Unfortunately spruce that is available for air plane use does not grow in, altogether, in one big tract, it is scattered around among other kinds of trees, so that ordinarily spruce is simply cut in connection with the general commercial operation for the cutting of other kinds of timber, and is merely, one might say, a by product of that general operation. The problem was to get out more of this spruce, and when Gen. Disque first started, it was of course right in the rainy season, the most disadvantageous—

Mr. MAGEE. What time was that?

Mr. MORLEY. Time to build railroads.

Mr. MAGEE. What time?

Mr. MORLEY. Well, as I say, when he first went out there for a preliminary survey, I think it was the latter part of October, but he didn't get out and get into the saddle and really start to do anything until probably December or the 1st of January.

Mr. MAGEE. 1917?

Mr. MORLEY. 1917 or January, 1918, and at that time of course the rainy season was under way. It was possible to increase the production of spruce by undertaking this riving process, and that meant going into the woods and selecting a spruce tree that appeared to be suitable for air plane material, that, in other words, had considerable quantity of air plane material in it and cut it down and get it out.

Mr. MAGEE. Well, you mean saw it or split it up there?

Mr. MORLEY. Well, I mean get it out somewhere where it could be sawed.

Mr. MAGEE. In what form had they been shipping it east prior to that time?

Mr. MORLEY. They had been shipping this G list stuff.

Mr. MAGEE. In the form of logs?

Mr. MORLEY. No; in the form of lumber.

Mr. MAGEE. Is that——

Mr. MORLEY. The G list lumber, called G list in the trade.

Mr. MAGEE. In what form, sawed?

Mr. MORLEY. Sawed boards, timber.

Mr. MAGEE. How thick were the boards; can you give us any idea?

Mr. MORLEY. Various, various sizes, simply spruce lumber.

Mr. MAGEE. Inch boards, or more, in thickness?

Mr. MORLEY. More, some of them, I suppose, were inch, 2-inch, 4 inches.

Mr. MAGEE. Plank?

Mr. MORLEY. Plank, some of them.

Mr. MAGEE. Do you know about the ordinary diameter of an ordinary spruce tree there?

Mr. MORLEY. Well, they vary.

Mr. MAGEE. What would you say as to that?

Mr. MORLEY. Spruce trees vary from all the way up to some of them as thick as 20 feet, 22 feet, I think, we found some.

Mr. MAGEE. In diameter?

Mr. MORLEY. Yes; but of course the ordinary logs won't run anywhere near as large as that.

Mr. MAGEE. I mean such as you ordinarily get there.

Mr. MORLEY. Well, that varies over a great radius; they are all the way from 4 to 10 or 12 feet.

Mr. MAGEE. In diameter?

Mr. MORLEY. In diameter, and many of them even larger than that.

Mr. MAGEE. Now, take these boards or planks, how long would they ordinarily cut them?

Mr. MORLEY. Of course logs that were produced for aeroplane spruce were cut into 20-foot lengths, but you can get all that information much better from people out there.

Mr. MAGEE. I understand, but I want to get your riving, the difference that the riving made with reference to that.

Mr. MORLEY. The difference is just this, that the riving made available quite a considerable amount of spruce that couldn't be had otherwise. Ordinary logging divisions are by means of building railroads into timber, cutting down the trees, taking the logs, and hauling the logs out somewhere where they can be transported for sawing up. In ordinary commercial operations we have to have railroads to get in the timber. This program of riving was started in the absence of railroads; there wasn't time to build the railroads; they could not be effectively built during the rainy season, and men could go into the woods and cut down selected spruce trees, then split them, quarter them into such sizes they could be hauled out by team-motor trucks, over plank roads that were built to get them to the place where they could be transported either by rail or water to where they could be sawed up into form; so this program of riving was undertaken to supplement the commercial production of spruce which was the only kind of production that was then under way but of course a large amount of spruce was obtained through that means that would not otherwise have been obtained, because contracts were made with small people, a little fellow with a small organization would take a contract and go ahead and rive the timber, and he would go into it with his organization and get out a lot of

timber and get it where it could be sawed and manufactured into aeroplane stuff; so in that way a very considerable amount of material was produced that would not otherwise have been produced; but, of course, in the meantime the program of the division was to get at the thing on a large scale, because the requirements that were coming in from the Allies and from Washington were for ever-increasing quantities of spruce, and that meant the opening up of tracts where large quantities of spruce were available and to log them in the effective commercial way by logging railroads and regular logging outfits.

That was undertaken just as soon as the division got organized and could get itself in shape to contract both with private parties and do it under contract, and do it direct, for the Government to produce this large quantity of logs to be sawed, ultimately into aeroplane material. Now, the statistics of course, they will speak for themselves, the production I think you will find was of course enormously increased.

Mr. MAGEE. The production, so far as the American manufacturer was concerned, was rather small, wasn't it?

Mr. MORLEY. I am speaking about the production of spruce—not the production of aeroplanes.

Mr. MAGEE. What I was thinking of was, the small production of aeroplanes as compared with these large attempts which you are describing, to get at the spruce.

Mr. MORLEY. Now, there you go into an entirely different phase of the matter—the question of the general aeroplane program of the United States for building aeroplanes. I am talking about the matter merely of spruce.

Mr. MAGEE. Yes; so far as we have investigated it seems to be generally conceded there wasn't a fighting plane or a bombing plane of American manufacture overseas in service.

Mr. MORLEY. But, now, the spruce production division had nothing to do with that.

Mr. MAGEE. Yes. I am telling you that the only planes of American manufacture sent over there were what we called the DH-4 make, in which the gasoline tank was entirely unprotected, so that an incendiary bullet going into the tank would explode it and set the machine on fire, so it appears that those were the only machines sent over there of American manufacture and observation machines, and were called by the boys in the service "flaming coffins," and what I was wondering was this, where did the large amount of spruce that you got out there and shipped east, where did those amounts go, if you know?

Mr. MORLEY. Well, I know that 70 per cent of them, of course in round numbers, went to the allies, Great Britain, France, and Italy, and about 20 per cent went to the United States.

Mr. MAGEE. On contracts with the United States Government or with the corporations producing spruce on the coast?

Mr. MORLEY. I didn't get that.

Mr. MAGEE. You said that you think that 70 per cent went abroad to the allies?

Mr. MORLEY. Yes.

Mr. MAGEE. Under contracts with this Government or with the corporations producing spruce on the coast?

Mr. MORLEY. After the United States War Department took over the production of spruce it was sold by the War Department to the Allies. Prior to that time the Allies had been competing with one another in the market in getting their own production. My understanding of it is this, when the United States went in there and took over the production of the aeroplane stuff itself, it had to assure our allies that we would guarantee them their supply, we would furnish them the spruce they required. Previous to that time, they had been competing against one another, picking it up as they could out there. When we went in there and said we will take over that, I mean the United States, of course, there would have been a hue and cry made by Italy, France, and Great Britain, that this is the only supply that we have, is from the United States, and, if you take it all yourself, we will have none, we are building aeroplanes in enormous quantities, so that the United States said that we will supply you, and the result was that 70 per cent of the production on the Pacific coast went to the allied Governments, and only 30 per cent to the United States.

Mr. MAGEE. As I understand the governmental agencies were first, the Spruce Production Division, later the Spruce Production Corporation.

Mr. MORLEY. No; first was the Signal Corps, the Signal Corps of the United States Army went out there first. When I went out there it was all part of the——

Mr. MAGEE. When did the Spruce Production Division begin to operate?

Mr. MORLEY. Ultimately it was decided to separate the Signal Corps from the Air Service, and the spruce production was taken over into the Department of Aircraft Production, distinct from the Signal Corps.

Mr. MAGEE. Do you remember about when that was, Major?

Mr. MORLEY. I should say that was about in July.

Mr. MAGEE. 1918?

Mr. MORLEY. 1918.

Mr. MAGEE. I thought that was when your Spruce Production Corporation began?

Mr. MORLEY. No; our Spruce Production Corporation did not begin those activities practically until the armistice was signed.

Mr. MAGEE. Yes; but what I mean is this, 70 per cent that our allies got, did they get that from the Spruce Production Division?

Mr. MORLEY. They did while the Spruce Production Division was——

Mr. MAGEE. In other words, this Government had control of the entire output, either when it was under the Signal Corps or the Spruce Production Division, and later the Spruce Production Corporation?

Mr. MORLEY. Yes. Now, of course, what became of that material after we shipped, I don't know anything about, of course.

Mr. MAGEE. You think that 70 per cent went to the Allies, and 30 per cent was retained by our Government?

Mr. MORLEY. Yes.

Mr. MAGEE. Now, where did the 30 per cent go, do you know?

Mr. MORLEY. It went to the various factories in this country that were making aeroplane material.

Mr. MAGEE. Factories at Grand Rapids and Buffalo and Dayton?

Mr. MORLEY. And Detroit, wherever they were making them. Of course it was some time before they began to get it, because the stuff that they would have gotten early in the program, for example in the spring, we will say of 1918, was still very largely this old G list, because it takes a long while to get the stuff from where it is actually cut shipped to a factory and get the factory to use it, so you will find that the factories were still using a lot of that G stuff until away late in 1918; they did not begin to get the results of our efforts out there until a very few months before the armistice was signed.

Mr. MAGEE. Well, now, the Government had inspectors there on the coast and they inspected the lumber before it was shipped to these factories?

Mr. MORLEY. Yes; that is, they did after we got out there. What happened before that I don't know; but after—

Mr. MAGEE. You mean after you got out there?

Mr. MORLEY. No, no, I mean after Gen. Disque took charge, one of the early things he did was to organize our inspection department.

Mr. MAGEE. About December, 1917, or January, 1918?

Mr. MORLEY. Yes. They may still have been buying some of that G list stuff, I don't know.

Mr. MAGEE. Take from that time on, when you got out there, did you create this system of inspection?

Mr. MORLEY. Yes.

Mr. MAGEE. Do you know what percentage of the product shipped to the factories after the Government began the system of inspection was suitable for air craft production?

Mr. MORLEY. I can't give you the statistics, but I think you will find it was a very very material increase; that is the acceptable part. I might say this about it, the Government requirements, in my opinion, that we were getting from the allied council, they all came in reality from the allied council that were generally sitting on the war, trying to manage it, were in reality based upon the inferior sort of stuff that they had originally been getting, ultimately when we got the good plant going effectively at Vancouver and were producing these very great quantities of spruce, and getting it in the way that was required, and selecting it in the way required, the percentage of material which was received was so great, or was so much greater than had been received before, that in reality the large requirements which the Government was making were in excess of the actual necessities of the case. When I was out there in, I should say August or September of 1918, they were asking us to produce 30,000,000 feet a month, a perfectly enormous production.

Mr. MAGEE. That is, the United States and Allies.

Mr. MORLEY. For the United States and the Allies. In reality I think that a very much smaller amount would have met all the requirements, but you see those requirements were based upon this old G list stuff very largely and the inferior kind of stuff they were getting which took a very much larger amount in footage to supply the aeroplane requirements. So that—

Mr. MAGEE. Where did—

Mr. MORLEY. So that in reality, probably half that, or 15,000,000 feet a month of the kind of material we ultimately were giving them would have met their demands; but you see it takes a long while for those things to get through to the knowledge and become

known to the people who were framing up those requirements. Therefore we were getting orders for perfectly enormous quantities of spruce, and we had to make our effort and fix our program to meet that tremendous demand. Now, just to proceed a little along with my narrative. When Gen. Disque got out there and got in the saddle and got where he knew what was being done, began to pick up the threads, they were asking, as I recall it, for 10,000,000 feet—

Mr. MAGEE. A month?

Mr. MORLEY. A month, and the efforts were made to increase the production up to that amount. It wasn't very long after that before the demands were increased to 15,000,000 feet per month, and we had to make our plans to meet that increased demand. Then demands came from Washington that they wanted 20,000,000 feet a month, and we had to make our plans accordingly. Finally they came up to 30,000,000 feet a month, and we had to make our plans accordingly, and those were the orders that we received from Washington, and they were all orders predicated upon the requirements that the allied Governments were making, and in conjunction with our Government what they said upon the situation as they saw it as passed upon by the allied council. Of course we, as a military division, simply got those orders. Now, what did we have to do? We had a perfectly enormously increased production. We had to build railroads into unexploited tracts of spruce; private parties were unwilling to do it. It was a problematical business; this selective logging was new. Perhaps I might depart a little from my regular order, because I wanted to take up the matter of the selective logging which we took up soon after arrival, and private parties were unwilling to do that, and as the result of that we started in with these cost-plus contracts and these large operations that resulted in some of the contracts that have been called into question, and I think the committee ought to bear in mind the perfectly enormous quantities of spruce that were demanded from our division.

Mr. MAGEE. How much per month?

Mr. MORLEY. And considering the necessity for the large expenditures, also for the fact that everybody supposed the war was going to last a year or two more, and the program was based upon the future and the future requirements, and where were we going to get the spruce.

Mr. MAGEE. Where did the Allies—

Mr. MORLEY. We had to go out and tap these new sources of supply to get it.

Mr. MAGEE. Where did the Allies get their spruce to make their planes before we got into the war?

Mr. MORLEY. They got it out there; they got it out there partly a very large portion of it.

Mr. MAGEE. From this Government or from private parties?

Mr. MORLEY. From private parties, they were getting this G. I. stuff.

Mr. MAGEE. Do you know where they got spruce from, any other source for their machines?

Mr. MORLEY. Why, I think that they got some from Europe. I think that they got some, picked up here and there, they got considerable amount from British Columbia; they were getting it from different places, too. Of course those sources were dwindling more

and more; the requirements of the war had to be met from the spruce on the Pacific.

Mr. MAGEE. There wasn't any apparent activity in the spruce until the United States entered into the war?

Mr. MORLEY. Yes.

Mr. MAGEE. How much was the production per month prior to April, 1917?

Mr. MORLEY. Well, I couldn't tell you what the statistics were; of course they were getting large quantities of spruce.

Mr. MAGEE. What was the production per month, say in October, 1918?

Mr. MORLEY. I think think that in October, 1918, we were shipping about 20,000,000 feet a month of airplane material.

Mr. MAGEE. That is practically the maximum?

Mr. MORLEY. Well, I should say the maximum probably was reached about that time, October or November.

Mr. MAGEE. Where did you get all this spruce, near the coast?

Mr. MORLEY. Up and down the coast of Washington and Oregon.

Mr. MAGEE. And by the use of temporary logging roads?

Mr. MORLEY. Yes. Now, if I can go on with a little with my narrative about this general program out there, what was done by the Spruce Production Division. As I say, in my opinion this matter of riving was of course a temporary expedient; merely to increase the production at a time when it was a life and death matter to get it, the airplane people were simply——

Mr. MAGEE. Getting what was in sight as quickly as you could?

Mr. MORLEY. Yes; they were simply saying the whole program of the war is depending upon our getting as much spruce as rapidly as can be had, get it. We bought all we could from everybody that had any to sell, and it was a question of increasing that production as much as possible, and Gen. Disque, after a consultation with the best advice that he could get out there, concluded that the riving operations that were undertaken would very materially increase that supply; consequently they were undertaken, and they did produce a considerable amount of spruce, too. Of course, that was a drop in the bucket, you might say, as to what was actually needed, and the efforts of the division out there were directed toward increasing that supply as much as possible, and they did it by contracting with all the loggers that would log and get out airplane logs, and building these railroads to open up additional tracks, and as a result of that, of course, we did obtain spruce, and did obtain all that the Government did require.

Now, this cut-up plant at Vancouver was built, as I recall it, by soldier labor in some 47 days. The best man that Gen. Disque knew about was gotten to run it, a practical saw mill man named Mitchell who was put in charge of it. There was no doubt more or less experimenting about it, beginning with getting it to function, getting it to produce the capacity that it should have, and there are a lot of technical features about this sawing of airplane material that I am not in a position to speak accurately upon, but you can get that information, and there were many difficulties that had to be encountered, but one of the best things that ever happened was getting Mr. Gleese out there, afterward Col. Gleese. His reputation was heard of, and parties with whom he was associated were asked to loan him

to the Government to go out there and look over this sawing proposition; so he came out, and it was found the need for his services was so great that he was inducted into the service and commissioned, and he put in great improvements in that cut-up plant.

Mr. MAGEE. What do you mean by cut-up plant; where they sawed it?

Mr. MORLEY. Cut-up plant at Vancouver. Let me tell you about the method of that operation. All the aeroplane material that the Spruce Production Division shipped when it finally got to functioning was shipped from the Vancouver cut-up plant. The Vancouver cut-up plant took from the private sawmills aeroplane cants; that is, those were great big plank that were cut in a certain way from selected logs. Those cants were sent into the cut-up plant and there were cut into what was called aeroplane stock and shipped, so that the shipments that were made when we ultimately got going were made from the cut-up plant.

Mr. MAGEE. The shipments from Vancouver east, both to the Allies and to our own Government?

Mr. MORLEY. Yes; everything was shipped from the Vancouver plant. Now, that Vancouver plant got its production up to a point where it was cutting 2,000,000 feet a day, of which about 59 per cent, I think, 55 to 60 per cent, was airplane material. Of course, it all had to pass inspection before it was shipped. The balance was side cut lumber which was accumulated. Of course, that percentage was only reached after considerable experimenting and working to get it up to that capacity, but it finally reached the capacity of something like 2,000,000 feet, being 60 per cent aeroplane material, and that took all the material that was being produced by private contractors and by cost-plus contractors and sent to the mills and sawed into cants, then came to the cut-up plant and was cut up into aeroplane material, such as was available for aeroplane material, and the rest into side cut lumber. That was what was shipped, I think, if your committee will examine into it, you will find that the material from that Vancouver cut-up plant averaged very high as to the stuff: a very large percentage of it went into aeroplanes.

Mr. MAGEE. Do you know when that began to operate?

Mr. MORLEY. I don't recall the exact dates, but I should say that they began to operate the cut-up plant in the spring of 1918.

Mr. MAGEE. Before you got there?

Mr. MORLEY. Oh, yes; it was in operation when I got there, and its production capacity increasing all the time, and the character of the material that it produced kept getting better, so that when I got out there in July they were shipping very large quantities, and they were shipping the right kind of stuff, but it took a little while of course to get on to that basis.

Mr. MAGEE. Was there any indication that the supply of spruce was running out from the sources from which you were obtaining it at the time the armistice was signed?

Mr. MORLEY. It would have if we had not had these big enterprises on foot, and there is the whole story in a nut shell, it seems to me you are judging of the costs, and of the success or lack of success of the spruce production division, so far as the costs are concerned on what actually happened. Now, of course, a very large amount of that cost, I can't tell you the exact percentage, but

certainly a very large percentage of it was all made with reference to the future. Of course when the armistice came, why there were these costly operations partly under way, partially completed, some of them just about ready to function, others would have been functioning in a very short time, no benefit was derived from them whatsoever, but of course if the war had continued longer, as we supposed it would, we would have been getting an enormous supply of these things as against which the cost of all that expenditure would have been amortized, but fortunately that did not happen, the war ended, and like many other expenditures that the Government made with a view to enormous production in the future, in one sense that was wasted. Of course in another sense it was not wasted because there was that preparation that I think had a good deal to do with the bringing of the war to an end when it did.

Mr. MAGEE. Where did you get the large quantity of spruce, from Oregon or Washington?

Mr. MORLEY. That I couldn't tell you.

Mr. MAGEE. You don't know anything about that?

Mr. MORLEY. I know something about it, but the exact figures I would not want to say. That is very readily ascertainable.

Mr. MAGEE. I thought you might have observed with reference to that when you were there.

Mr. MORLEY. We got large quantities from every State, but whether more from Washington or more from Oregon, I would not want to say.

Mr. MAGEE. Well, what I——

Mr. MORLEY. But it is very difficult for me to be asked here just offhand to give you any account of what went on there. This spruce production division was given a great task to accomplish. It gathered its officers together and they were all working, and working night and day to accomplish that end. Now, they may have made mistakes, and probably did, but as we look back on it now, and see the large sums of money that were spent as against future requirements, of course that money might have been saved if we had not done those things, but in the light of the information that we then had, the amount of spruce that was going to be needed, the amount of spruce that they were demanding of us, and the available supplies we were all tapping and getting from these people, in the opinion of us out there had to be done.

Mr. MAGEE. I want to look at the question from a practical standpoint. Seventy per cent of production sold to the Allies, the Government obtained its money for that, didn't it?

Mr. MORLEY. Yes; I suppose settlement has been made.

Mr. MAGEE. So, so far as the expenditures are concerned of this Government, why, they would be applicable to American production?

Mr. MORLEY. I don't get your point.

Mr. MAGEE. What I mean to say is, if we sold 70 per cent of our production to the Allies, we must have got our pay for that?

Mr. MORLEY. We have, yes.

Mr. MAGEE. So that the large expenditures of the United States in aircraft production would be limited to the other 30 per cent of the production?

Mr. MORLEY. I suppose you mean this by that: That out of something over \$40,000,000 that was spent by our division, 70 per cent of the money was contributed by the Allies to the United States Treasury, and the United States Treasury only was called upon ultimately to meet the 30 per cent?

Mr. MAGEE. I don't know as to that, but I presume those facts can be ascertained; that is, I understand that about fifty millions were expended by this Government on the coast. Now, whether the amount of money which the Government received from the sale of, say, 70 per cent of the product, forms any part of that, I don't know. Do you know anything about that?

Mr. MORLEY. Yes; this is what was done. The cost of the whole operation was prorated over the entire amount of lumber and the Allies had to pay their share of that cost; as against that they have their share of what ultimately will be the salvage out there as the result of the liquidation of the assets to recompense them. Of course, the United States will also get back and have refunded to it such salvage as will help to meet its 30 per cent that it paid, but the entire cost of this whole operation, including the construction of these railroads that we have spoken of, was spread over the entire cost of that lumber and the Allies got about 70 per cent of it, and they were supposed to pay their share of that cost; whether in the ultimate settlement they have paid exactly that amount or not, I don't know, but I read in the papers the other day that a settlement was finally reached by which England had paid something like thirteen millions, as I recall it.

Mr. MAGEE. Of this production you mean?

Mr. MORLEY. Yes; I am not sure about the figures.

Mr. MAGEE. Well, the salvage probably falls short, I suppose. don't it?

Mr. MORLEY. Well now, that I could not tell you, because I understand the lumber business has boomed out on the coast and they may get more than they expected; I think that they will get more.

Mr. MAGEE. Take, for instance, the extension of the Chicago Milwaukee & St. Paul Railroad, you say 38 miles, with an expenditure of four or five millions of dollars, why, what possible purchaser can there be for that property except the railroad?

Mr. MORLEY. Well, that of course I don't know, but that railroad might very well—the construction of that railroad might very well have justified itself. In the first place, if the war had continued another year or another six months we would have gotten a perfectly enormous amount of spruce from that district which would have been hauled over that railroad and helped to amortize a very large proportion of its cost; then, in the end, you would have had a railroad available for selling to somebody. Of course it is valuable to some of the people who own all that area of timber in there. They now have got a railroad by means of which they can get their timber out, and ultimately that railroad can be sold to somebody, for what price, I don't know, but I think—

Mr. MAGEE. The only probable bidder—

Mr. MORLEY. I think it justifies itself. What is that?

Mr. MAGEE. The only probable bidder is the St. Paul Railroad isn't it?

Mr. MORLEY. Well, if I were representing the United States, I would not want to concede it; I would certainly hope that I might get some others.

Mr. MAGEE. It is practically an extension of the road, isn't it; built with the same permanency as the main road there?

Mr. MORLEY. It is a well built railroad.

Mr. MAGEE. Well, with that same permanency, isn't it?

Mr. MORLEY. I don't know; I think it is probably just as well built as the balance of that line from Port Angeles, along there that belongs to the Milwaukee road. I think it is probably as well built.

Mr. MAGEE. I assumed in going into timberland to get out spruce, that ordinarily a logging road would be built; that is, a temporary road for the purpose of getting out spruce, not a permanent structure.

Mr. MORLEY. I don't think so, in that kind of a proposition, in opening up that big territory—you are asking me just for my judgment about it?

Mr. MAGEE. Yes, you didn't get any spruce there; all the spruce you got you got from other sources? Now, do you know anything about the supply of the other sources from which you did get spruce?

Mr. MORLEY. That is rather an unfair remark to make, that we built it and didn't get any results from it. We didn't get any results from it. Why?

Mr. MAGEE. I said you didn't get any spruce.

Mr. MORLEY. We didn't get any spruce. Why? Why didn't we get any spruce? Because it was completed at the time when the armistice came, and they didn't want any more spruce, but if the war had continued longer we would have got an enormous amount.

Mr. MAGEE. That is the fact, isn't it? I was speaking about the fact, not in a spirit of criticism, but as a matter of fact you didn't get any; so that all the supply that was needed was got from other sources. Now, do you know anything about the additional supply from either of those other sources from which you got the spruce?

Mr. MORLEY. Just what do you mean by that?

Mr. MAGEE. Why, whether or not there are quantities of spruce available in those States easily accessible without going into the what you call the Olympia tract?

Mr. MORLEY. Yes; we were tapping those, making arrangements, and we built our railroad from Quinault Bay north to get some, we built our railroad toward the Blodgett tract, bought that Blodgett tract for that purpose, and we had contracts with other operators by which they were to open up tracts of spruce. In other words, we were reaching out to bring into play every available point of production that there was, because it was necessary to do that in order to gear up to the requirements that were made upon us. Now, you see the war came to an end; therefore very large amounts of money that were expended there, needed to enable us to get out this additional source of supply, was not brought into play; that is true; no one can gainsay that.

Mr. MAGEE. You remember when Congress appropriated in about 30 minutes six hundred and forty millions of dollars for aircraft production, don't you?

Mr. MORLEY. Yes.

Mr. MAGEE. You remember at that time it was commonly stated we soon would have 10,000 or 20,000 planes at the front?

Mr. MORLEY. Yes.

Mr. MAGEE. Well, now, it appears from investigation up to date that practically one billion fifty-five millions of dollars had been expended, and the undisputed result seems to be that not a pursuit plane, which is called a fighting plane, ever reached the front of American manufacture, nor a bombing plane of American manufacture, and that the only planes that reached the front from this country were the DH planes, I think some 213 at the front, and perhaps a few more on the way, and those were designated, as I have said, by our boys and others as "flaming coffins," because the gasoline tank did not have any protection, and an incendiary bullet piercing it would set the whole machine on fire, so I think the general opinion in this country is, with the expenditures of a billion and fifty-five million dollars, we made no progress in the aircraft art, at least no material progress, and that our rank as compared with the aircraft progress of other nations is very low.

Of course, the money has been spent—it is gone—but as it seems to me, and I think to other Members of Congress, that there isn't any subject of greater importance, so far as the production in this country is concerned, than the subject of aviation, and all these negative results with such a large expenditure are clearly before the country, and that an investigation of this character may be of very great benefit in impressing upon the country the absolute need of getting some responsible head upon which responsibility for such lack of results can be fixed, as of future benefit to the production and to the country.

Mr. MORLEY. Now, in all that I am entirely in accord with you so far as that is concerned, but you are inquiring now into the production of spruce. Of course, the Spruce Production Division had absolutely nothing to do with building airplanes and getting them to France. Its job was to get the spruce needed by the allied Governments and this country in order to build this great number of airplanes that everybody wanted.

Mr. MAGEE. Certainly; and that we expected we would get.

Mr. MORLEY. And there was that tremendous airplane program that you have referred to that was going to place 100,000 airplanes in the sky, and as the result of that the Spruce Production Division over there was told to get the spruce.

Now, whatever your committee can find out with respect to what was done in the other things in connection with building airplanes why, I am heartily in favor of you doing it—

Mr. MAGEE. Yes, but we want to know—

Mr. MORLEY. But—

Mr. MAGEE. In this connection, too.

Mr. MORLEY. I think that you ought to investigate whether or not the money was properly spent on the Pacific coast.

Mr. FREAR. I do not see that you and I differ any as to our views as to the purpose of the investigation. Of course, you are just as much interested as I am, just as much interested as any other loyal American citizen, in this question of aviation. In case of future war of the country, why, it seems to me it would be a tremendously important element, the supremacy of the air, from the fact you can not hide in the air except behind the clouds, and the way I view it.

instead of this Government being hindmost in this question of aviation we should be foremost. That is the way I look at it, and if I didn't feel that way about it, I would feel I would be useless in spending my time in investigating this subject.

Mr. MORLEY. Whatever the rest of the airplane program may have done, whatever criticism there is to make about that, and it is probably subject to a lot of criticism, and I am heartily in sympathy with your investigating it, but there was demand upon demand made upon the Spruce Production Division for those large quantities of spruce to meet this tremendous program, and they wanted it right away, as soon as they could get it, and they all supposed and we supposed that the war was going to last a long time.

Now, the question is, Did the Spruce Production Division deliver it; did they get the spruce? I think you will find from the time we got organized out there and got under way, we produced all the spruce that was required from day to day, and we were meeting the ever-increasing requirements that were put upon us. I think you will find, when you get out and look at the statistics and get into it, that we did meet those requirements; as far as delivering the stuff is concerned for this enormous air program the Spruce Production Division got it. Now, did they get it at too large an expense? Did we pay too much for it? Did it cost too much? Of course it cost a great deal of money, the conditions under which we operated, the speed at which we got to going, everything else made cost a secondary consideration; the main thing was to get it, so I think you ought to take into consideration, then, a certain further fact, that—I do not know what percentage of that cost, but certainly a very large percentage—a great many millions of dollars of the expenditure that was made in the Olympic district under this Simms-Carey Co., the building of those railroads north and south from Quinault Bay, netted absolutely no returns. They were being built to supply the requirements during the succeeding months, and therefore, when you charge it off against the net production actually made, of course, it showed an entirely misleading situation.

If the war had continued, why, those costs would have been amortized over the future production, and the costs would not have looked so large. I was out there a good many months, and I knew the officers and I knew the way they felt, and what they were doing. They were all working under high pressure, patriotically, doing everything they could to get the material for the Government and to protect the interest of the Government in every possible way they could. Now, things have been said here about Col. Hitchcock. He may have made mistakes, but whatever he did, I know this to be a fact, he was doing from patriotic motives and in accordance with the best of his judgment.

Now, take for example, what was said in the insinuations made in the purchase of that Blodgett tract. Col. Hitchcock had some negotiations with Blodgett; there was some spruce timber interspersed with other timber, but it contained a large percentage of spruce, and it was needed. Mr. Blodgett owned it and Col. Hitchcock tried to negotiate with Blodgett for the purchase of it, not to purchase all the timber, but what we were doing with all these other timber owners was to get a contract with the owner of the property to let us go in there and select as such spruce trees as would be marked by the

Government spotters as available for airplane material and to go down there and take it out. Men were loath to make those contracts with the Government, and although they didn't want to, they were willing to let the Government pick out a tree here and there and cut it and take it out. Blodgett didn't want to do that; he thought it would spoil his tract and didn't want us to go in there and selectively log that.

Mr. FREAR. There were other timbers in the tract, I suppose?

Mr. MORLEY. Yes; a large amount of hemlock, fir, and other timbers; but it was only selected trees that our spotters would go out and designate as containing straight-grain-stuff, and containing a certain percentage of airplane material, so as to make it worth while to cut them. Hitchcock was trying to get the material down there as cheaply as possible, and tried to get Mr. Blodgett to sell his timber, and to allow us to selectively log it and sell those logs to the Government, because that is the way we bought most of the logs, from private people who were operating it, and so it was desired that if Blodgett would not allow his timber to be selectively logged by us that he would sell that timber to somebody that would sell the spruce logs to the Government, and whatever Hitchcock did in his negotiations with Blodgett was to get that timber as cheaply as possible for the United States. Hitchcock is a rather blunt man, forceful in his talk, and I imagine he rubbed Mr. Blodgett the wrong way, and the result was that Mr. Blodgett would not deal with the United States. We needed that property, and we negotiated back and forth, and it was only all the time for the right to log it; Of course, we could have commandeered it, but we didn't want to do that if we could agree with him on a price, and that was our policy all the way through, and so when it came to Mr. Blodgett it ultimately seemed the thing to do, to buy that tract of timber; enough could be gotten out of it so the Government could not be paying too much for the spruce; it would not be such a costly proposition, and it was decided to buy the tract of timber.

Something is said about that contract having been closed just about the time the armistice was signed. Mr. Blodgett had agreed to sell his timber at that price before the armistice, and he had built this railroad down there, and we built the mill at Toledo which was going to do the sawing, all those things were all linked up into one enterprise; the mill would be much more valuable if it could be handled in connection with the railroad and the mill and railroad with the timber. There we had the railroad and the mill. The war was at an end, but as a business proposition it was the thing to do with that timber; if we allowed Mr. Blodgett to keep it maybe he would be the only one in the market for the railroad, and the question was, What was the best thing to do? We concluded at that time we had better buy the Blodgett tract.

Mr. FREAR. When was that bought, do you know?

Mr. MORLEY. I can not give you the exact date.

Mr. FREAR. Before the armistice?

Mr. MORLEY. The agreement was signed on the part of Mr. Blodgett.

Mr. FREAR. Written agreement?

Mr. MORLEY. Letters and correspondence.

Mr. FREAR. Was the Government bound to take it?

Mr. MORLEY. Not legally bound, but morally bound; but there had been no signed contract.

Mr. FREAR. You think the contract was closed after the armistice?

Mr. MORLEY. Oh, yes; I closed it; I know all about it. We had a number of conferences, and we took the best advice we could from men who were familiar with conditions out there—men who were on our advisory board—and our own judgment, and we concluded it would be better for the Government to buy that tract of timber, and so we took it.

Mr. FREAR. Is that a part of the property that the Government has advertised for sale on September 2.

Mr. MORLEY. Yes, sir. Maybe that was a mistake in judgment.

Mr. FREAR. We are glad to hear your own version of it, Major.

Mr. MORLEY. We acted for what we thought was the best for the United States at that time.

Mr. FREAR. You acted on your best judgment?

Mr. MORLEY. Yes; and that is true with respect to other things that were determined on out there to do this or that. We acted in the best possible light we had, and the best judgment. Personally, I went out there without any axes to grind, by accident, because I was detailed and sent out there, and these questions came up from time to time and I simply had to pass on them and use my best judgment as to what was best under the circumstances to do, and you will find that is true with all the men who had charge of the various departments out there. They may have made mistakes, but I do not know of any graft on the part of Army officers or on the part of contractors. That was part of my job to look at everything, at every contract that was prepared, and to protect the interests of the Government, as best I could, and that is what I attempted to do. Now, the thing which I think did more to bring on this investigation than other thing out there was this Simms-Carey enterprise, this Simms-Carey contract.

That stirred up a good deal of feeling in the State of Washington among a good many men; they did not like to see some outside concern coming in there and logging and a great deal of criticism was directed against the department because of that Simms-Carey matter. The Simms-Carey enterprise could justify itself only because there was a tremendous amount of available spruce up there that no particular private parties in Washington were willing to get out, and it was needed, and we would have to hire somebody to do it. Of course, as it turned out, we did not need the tract, but we all supposed we did.

Mr. FREAR. Was any attempt made to advertise in a public way to get bids, anything of that sort, of the premises?

Mr. MORLEY. I don't know that any attempt was made to advertise to get bids, anything of that sort; but of course attempts were made with a great many of the people to get them interested to open up those tracts of timber in there, but nothing came of it, and it was quite a problem as to just what that Simms-Carey proposition would result in; it was a very large undertaking and would probably absorb a very large percentage of the logging equipment of the State of Washington, particularly in that district, and the operators there were fearful that when the Government program got under way that every man would be drawn upon and they would be put out of business, because it took an enormous number of logging equipments and crews and logging organizations to operate under that contract, and

I know there was a feeling up there in Seattle that it was a mistake and that the organizations that were there should have been made available, so that their situation in the industry would be conserved and the whole thing not disrupted.

This is a good illustration; that feeling got worked up there to quite an extent, and finally, when it came to the logging of this Blodgett tract, which was going to take a very considerable equipment and a very large number of men, and to that extent draw on the industry out there, a great number, a group of local loggers got together and organized a company, and with a man named Frost at their head came down to Portland and said: "We will log that Blodgett tract for the Government at cost, and charge only a fair rental for our logging equipment that we put in. We have got a little nucleus together, and we will turn in our equipment and organization and log that Blodgett tract for the Government at cost." And that is what we have been trying to do all along. We said: "That is fine and patriotic; that is what we were trying to get you to do," and we made a contract with them to log the Blodgett tract for cost, and I drew the contract which provided for a nominal consideration, \$25, \$1 for each of them, they all wanted to be a-dollar-a-year men and did not want to make any profit out of the Government at all. So that contract was made, and they were going to go down there and use their judgment and their experience for the Government, free of charge, and we were to pay them a rental fixed at 15 per cent and 10 per cent for depreciation of the equipment that went in there, so that is the way the Blodgett tract was going to be logged.

Now, with that example, there had been so much talk about the great operations in the Olympic district, that it was going to absorb the whole industry out there, take their men away from there; they didn't want Simms-Carey to log that, and they thought that Simms-Carey was going to make a big profit out of it that they ought to have. We said, "Get together, gentlemen, and we will see what we can do with Simms-Carey." We said to them, "We believe it is best for the industry and the feeling in the State which seems to be against you to let the logging industry of Washington go in there and do that logging, and you abandon your contract," and finally Simms-Carey said, "All right, they will do that." They said, "If that is the way you feel about it;" and so we said to these loggers: "Get together now; Simms-Carey will abandon their logging contract and you take it on the same basis as this Frost enterprise, at cost, without any profit, and we will pay you a fair rental for your equipment that you put in." And they had a meeting down there, several meetings, and they tried to get a sufficient number of men to do that. We said that we had to have their decision promptly, that time is everything. That Simms-Carey were ready to go ahead and we are ready to get into this logging operation; we can not wait. They got their people together and finally said: "We can not put it through: there is not enough to go into it." There was a situation where apparently the industry was willing to undertake something, but when you narrowed it down they were loath to do it; could not get together.

Mr. FREAR. They furnished large amounts of spruce, didn't they?

Mr. MORLEY. They furnished large amounts of spruce.

Mr. FREAR. Practically furnished all that was furnished, didn't they?

Mr. MORLEY. Yes; but there were these additional large tracts that had to be opened, and the question was how to do it.

Mr. FREAR. There was no spruce, was there, until you come to the terminus of this railroad?

Mr. MORLEY. Some.

Mr. FREAR. I mean, in any quantity. Was not the spruce available within a less distance than 40 miles from where you were getting it out?

Mr. MORLEY. You mean in other parts of the country?

Mr. FREAR. Around in this section?

Mr. MORLEY. In the Olympic district or other places?

Mr. FREAR. I mean, these localities where you were getting it out.

Mr. MORLEY. Yes; we got it from those localities, but we wanted more, but the question of opening up additional sources of supply—we were contracting until it came to the end, and we saw it was a chance that the war would close, but until that time we were contracting with everyone that showed any inclination of opening up timber to get logs out for the Government.

Mr. FREAR. You criticized those logging associations?

Mr. MORLEY. I am not criticizing them.

Mr. FREAR. They furnished all the spruce that had been furnished and they claimed they could furnish enough to meet all needs. The position they took was a natural position, wasn't it?

Mr. MORLEY. I am not criticizing them; I am simply saying the difficulty was to get private parties to go into it, start operations, which necessitated the Government going in there, and spending money to open up these new operations.

Mr. MAGEE. What was the practice at the conclusion of logging operations? Was the spruce cut separate from the other timber, or was the timber cut clean?

Mr. MORLEY. The spruce was cut separately, Mr. Magee, in some of the operations.

Mr. MAGEE. The logging operations were conducted both ways, were they?

Mr. MORLEY. Of course quite a considerable amount of spruce logs was obtained in operations that were conducted in the ordinary commercial way. If a man had a tract of timber which he was logging, and getting out all kinds of logs, but spruce and fir, he would sell to the Government such spruce logs as passed inspection as being suitable for airplane purposes, and in that way we got a large number of logs as the result of commercial operations. In addition to that many people were engaged in selective logging for spruce logs alone; in that case, only the selected spruce would be cut.

Mr. MAGEE. When both kinds of timber was cut, for what part of the timber did we pay?

Mr. MORLEY. We only paid for the spruce logs.

Mr. MAGEE. And the private loggers paid the expense of the other timber?

Mr. MORLEY. Yes, sir.

Mr. MAGEE. Now, in reference to the railroad that was built to Crescent Lake: Was there any provision in the contract with reference to the sale of that, or was any one else to bear any part of the cost; was there any agreement between the United States or the timber

people and the railroad company that they would pay anything for this railroad after the United States had ceased to use it?

Mr. MORLEY. No.

Mr. MAGEE. Was there any understanding with reference to that matter, so far as you know?

Mr. MORLEY. I don't know of any.

Mr. MAGEE. I assumed that the only persons that would be interested in the purchase of the railroad would be either the lumber interests or the railroad company.

Mr. MORLEY. Not necessarily.

Mr. MAGEE. Who else might be interested in it, so far as you know?

Mr. MORLEY. Why, I suppose a man who had in mind going in there and buying timber, and getting together a considerable area of timber, might very well consider the purchase of the railroad.

Mr. MAGEE. But that would be embraced within the timber interests.

Mr. MORLEY. Either the present timber interests or prospective timber interests, or the Milwaukee Railroad, I should say would be the logical purchasers of that railroad.

Mr. MAGEE. What right did the United States acquire in the right of way of that railroad.

Mr. MORLEY. Acquired the fee.

Mr. MAGEE. How wide is the right of way?

Mr. MORLEY. My recollection is it was a 100-foot right of way: I could not without having the deeds state absolutely, but that would be my recollection.

Mr. MAGEE. Was the equipment for the railroad purchased or not—that is, the rolling stock?

Mr. MORLEY. I think not.

Mr. MAGEE. Do you know whether any arrangements were made to provide the rolling stock?

Mr. MORLEY. Well, I don't want to say positively about that. Negotiations had been under way from time to time with the Chicago & Milwaukee Railroad with respect to both equipment and operation, and I don't recall now just what the status was at the end, but it would not be recollection that any equipment in the way of rolling stock had been actually purchased.

Mr. MAGEE. Now, you saw some of these contracts—what are called the cost-plus contracts.

Mr. MORLEY. Yes, I threshed over them again and again.

Mr. MAGEE. I presume you recognize there are two kinds—one on a definite basis and the other on a percentage basis?

Mr. MORLEY. Yes, sir.

Mr. MAGEE. To which class of these contracts did this belong: or did you have both classes?

Mr. MORLEY. We had several classes. There was the Simms-Carey, or, rather, two of the Simms-Carey; one for the construction of the railroad, which was on a straight cost-plus basis, and the other was the logging contract, so-called, or the spruce contract, in which they agreed to sell us a certain amount of airplane lumber, at a price; but it might be turned into a cost-plus contract under certain circumstances; there were percentage contracts.

Mr. MAGEE. Were the percentage contracts based on actual costs?

Mr. MORLEY. The percentage was based on actual cost.

Mr. MAGEE. What, if any, protection was there against the temptation to increase the cost in order to increase the profit?

Mr. MORLEY. The supervision we gave. Those contracts were considered as Government operations, and they were so treated. They came under the purview of what we call Government operations, and the intermediary of cost-plus contractor was had simply because the Government itself was not in a position to carry on the work directly, but it supervised every expenditure they made, and before it was made; there was a complete supervision, and so with everything that was done it was just as though the Government was doing it itself.

Mr. MAGEE. Now, what do you know, so far as the connection of Mr. Sligh with the service is concerned?

Mr. MORLEY. Why, I don't know as I want to go into that. I simply understand that Maj. Sligh was either in charge, or, at least, had some responsible position out on the coast in connection with the purchase of airplane material before the Spruce Production Division was organized and got under way, and was superseded; just exactly what his duties were, I don't know.

Mr. MAGEE. Were you acquainted with him personally at that time?

Mr. MORLEY. No; I was not. I simply know he has been a consistent critic of the whole program ever since he was relieved from it, and apparently in every way has endeavored to belittle whatever was being done, and throwing obstacles in the way of doing anything. That was the attitude of the major; but personally I know nothing about him and have nothing to say about him.

Mr. MAGEE. When did you become acquainted with Col. Disque?

Mr. MORLEY. I knew the colonel only by reputation when I went out on the coast.

Mr. MAGEE. You had never met him personally until then?

Mr. MORLEY. Yes, but only casually. Gen. Disque a number of years ago was in charge of supervising the National Guard Cavalry in the States of Ohio and Michigan, the officer detailed by the War Department to look after that Cavalry. He is keen, professionally, very much interested in his work, and very different from the Army officers we were acquainted with, and did everything possible to increase efficiency and esprit de corps, and as a young officer was very enthusiastic, and in that way got to know a number of men in Ohio identified with the Cavalry. My identification had just about ceased at that time, but I was always interested in the Cavalry, and although not an officer at that time, he knew of me as being a former officer and I know of him but I never had an personal acquaintance with him.

Mr. MAGEE. Are there any other facts about this matter with which you are acquainted that you think ought to be presented to the committee at this time?

Mr. MORLEY. There are a host of facts, but the difficulty is to go into that at all without knowing what the committee wants. I have only this to add about Gen. Disque, inasmuch as his name has been brought out. Of course, the general ought to appear before this committee and speak for himself, because he is more familiar than anybody else with the airplane program. The general was subject to a great deal of criticism in the early days out there by the people

who did not know him very well, but I think before the end of his régime out there it was generally considered he had done a very fine piece of work. I have had a pretty long experience with business executives.

I am a lawyer whose practice has brought him in connection, in association and intercourse with business executives for a great many years. I have been associated with business enterprises myself, and I was pretty intimately connected with everything the general did on the coast, because hardly a day went by that I would not be called into conference with him about one thing and another, and speaking now merely as a matter of opinion of the man and his capacity, I think he was a very able man on the whole, and did a fine piece of work out there. I have not met many executives that impressed me more favorably than he. He was forcible, able to get things done, able to get things through, made up his mind promptly, but after full consideration of the facts. He was as good a man as could have been picked to take charge of that position. Of course, he himself wanted to be in France as well as his chief of staff, a young West Pointer, Col. Sears, both wanted military service over there, but he put all he had in the work out there, and in my opinion, he did it well. That is simply for the committee. No doubt mistakes were made.

Mr. MAGEE. What information have you to show that he wanted to go to France?

Mr. MORLEY. Simply from my own talk with the General on many many occasions, I know how he felt, and must have felt as a Regular Army officer.

Mr. MAGEE. How old a man is he?

Mr. MORLEY. About 38 or 39.

Mr. MAGEE. Now, unless there is something else, I think that is all something else that you have in mind.

Mr. MORLEY. I only want to say this: I am a Republican, and I am in favor of investigating all these war expenditures just as carefully and thoroughly as can be, both as to what they did, what they accomplished, what it cost, but I think this is true from my observation of things out there, that the Spruce Production Division made good, so far as production of spruce was concerned. We got the material that the Government and the Allies wanted, and we got it in larger quantities at the end than they later found they needed, based upon their previous experience, but it was found that a lesser amount was due. We furnished all the Allies and this Government required. We proved that when we did begin to function that we got the stuff, and I think, as far as that is concerned, that question can be answered in the affirmative. Did it cost too much? That is the other thing, was money wasted? Of course, it cost a large sum of money because speed was necessary, and a tremendous increase in production was essential, and it cost a lot of money. It is for you gentlemen to say whether it cost too much under the circumstances, but my own observation has been that in view of the tremendous requirements that were being made and would have been necessary if the war had continued, that its cost was reasonable. Seventy per cent of that cost was paid by the allied Governments, that this Government, through the purchase of material for airplane factories, only spent 30 per cent. There will be a large salvage, how much I don't

know, but if the lumber industry is good it will be a large amount salvaged, which will go to reduce the amount of money that the Allies have spent.

Mr. MAGEE. I guess that is all.

Mr. LEA. Do you think 70 per cent of the spruce production would equal 70 per cent of the cost?

Mr. MORLEY. The plan was this—

Mr. LEA. I understand that. Would they have paid 70 per cent of the spruce produced, whether they paid 70 per cent of the cost of the amount expended at that time, the question is whether or not 70 per cent of the cost of the spruce produced and sold would amount to 70 per cent of the expenditures. Have you any statistics on that?

Mr. MORLEY. We took the entire cost and amortized it over the estimated production. Of course, they kicked on the price, the Allies did, but when you come to amortize the cost of the railroads and add it to the cost of airplane material, it makes it something like \$600 a thousand. Of course, if the war had gone on, it would have cost less.

Mr. LEA. What I mean is, whether the Allies paid for 70 per cent of the spruce obtained there must be a matter of knowledge to the Government, if any adjustments are made; that is, I don't see myself where there would be any close connection between their purchase of 70 per cent of the spruce produced and 70 per cent of the expenditures of the Government.

Mr. MORLEY. We billed it to them and amortized the cost of the expenditures over the lumber that was sold them. If you actually took the exact cost of getting out, we will say, 1,000 feet of airplane material, or some operation that was already under way and had not spent much to go in there, or some that was bought on the market, although that might have cost \$100 a thousand, the cost of the lumber as ultimately billed to them, and as it was expected they would settle for, was based on all this expense being amortized over the whole production, so instead of being only \$100 a thousand for lumber, they paid something like \$600.

Mr. MAGEE. The first payment will only be a partial payment, in effect. When the settlement was finally made, they would pay their part.

Mr. MORLEY. No; as a matter of fact, they did not pay anything for it. It was billed to them at these large prices and they were fussing about it and had their experts out there when I left.

Mr. MAGEE. I was getting at their plan of payment. They were supposed to pay so much a thousand, practically, as the lumber was delivered, weren't they?

Mr. MORLEY. But they did not; as a matter of bookkeeping, it was billed to them, but they didn't pay it.

Mr. MAGEE. That is all.

Mr. LEA. That is all.

(Witness excused.)

TESTIMONY OF WILLIAM A. HYDE—Recalled.

Mr. MAGEE. What is your age?

Mr. HYDE. Twenty-nine years of age.

Mr. MAGEE. Did you volunteer, or were you drafted into the service?

Mr. HYDE. I volunteered.

Mr. MAGEE. Into what service did you enter originally?

Mr. HYDE. I was in Milwaukee and I asked to be inducted into the Artillery, and then I tried to get in the Quartermaster's Department, and I could not go in there, and they sent me out to the Spruce Division.

Mr. MAGEE. You first became a price-fixing clerk?

Mr. HYDE. A price-fixing clerk.

Mr. MAGEE. The prices fixed by you were on the supplies as they were billed in.

Mr. HYDE. All the invoices were sent direct to Portland to Porter Bros., and they would make out the requisitions, as I understood, from a civilian clerk that came there, Guy Porter would telephone to the different firms and obtain prices, and his assistant would submit the prices to Guy Porter and he would select the firm offering the lowest price, and he would order from them, and he requested these different firms to add 23 per cent to their invoices.

Mr. MAGEE. What was the name of that clerk?

Mr. HYDE. His first name was William.

Mr. MAGEE. Do you know where he is from?

Mr. HYDE. Portland, Oreg. He was with Porter Bros. before.

Mr. MAGEE. You were at the distributing point with this company?

Mr. HYDE. Yes, sir.

Mr. MAGEE. Where did the order come into the company from which distribution was finally made?

Mr. HYDE. To Portland; we would get the copy of the requisition.

Mr. MAGEE. From each camp?

Mr. HYDE. From Portland. They would be charged up to camp 1-A originally, and they would distribute them among the other camps.

Mr. MAGEE. You had a recharge for all the camps?

Mr. HYDE. For the subsidiary camps, also camp 1-A.

Mr. MAGEE. Did you charge according to the requisitions that went in?

Mr. HYDE. I was told to charge according to the highest requisitions; they varied in price.

Mr. MAGEE. And you followed that practice, did you?

Mr. HYDE. I followed that practice; yes, sir.

Mr. MAGEE. How long were you pricing clerk?

Mr. HYDE. For about two weeks, I guess.

Mr. MAGEE. The different prices came in from the different stores?

Mr. HYDE. For the same commodity. I remember in the case of tents, they varied about \$50, I believe; I think \$125 to \$175.

Mr. MAGEE. For how many tents?

Mr. HYDE. Just a dozen or so at the beginning; after that we had several hundred.

Mr. MAGEE. There was a large difference in the price of tents?

Mr. HYDE. Yes, sir.

Mr. MAGEE. Furnished by the same firm?

Mr. HYDE. Yes, sir.

Mr. MAGEE. Any difference in the size of the tents?

Mr. HYDE. No. They were the identical tents. I am not positive of those figures, but they varied about \$50.

Mr. MAGEE. Do you know from what company they were obtained?

Mr. HYDE. It seems to me they were obtained from the Government and charged to the Quartermaster. I do not know whether they were obtained directly or indirectly from the Government, but they came from the Quartermaster originally.

Mr. MAGEE. From whom did you get that requisition for tents?

Mr. HYDE. From the Portland office of Porter Bros. They would make out a copy of the requisitions and put down the prices themselves.

Mr. MAGEE. Did you handle the tents?

Mr. HYDE. No; they would be in the warehouse.

Mr. MAGEE. You saw them only in the warehouse?

Mr. HYDE. Of course, as I went out on the road I saw them outside. We only had one size, except for the kitchens; they were about 40 feet long.

Mr. MAGEE. Was anything said about the future adjustments of these different price matters?

Mr. HYDE. Nothing at all.

Mr. MAGEE. Do you know if anything was done about that finally?

Mr. HYDE. No. The auditor used to come in from Portland, and he used to tell Mr. Smith to deliver the highest price of Porter Bros., they wanted to play safe.

Mr. MAGEE. You would list to all the camps at the highest price of any given article?

Mr. HYDE. Unless I made a mistake; sometimes I did not look twice.

Mr. MAGEE. Can you state substantially how much passed through your hands there?

Mr. HYDE. Almost everything for those two weeks.

Mr. MAGEE. What would it be in value?

Mr. HYDE. It seems to me we did about \$10,000 worth of business at that time; that is, we billed about \$10,000 a week to the camps.

Mr. MAGEE. Was there any other price-fixing clerk besides yourself?

Mr. HYDE. One other at that time.

Mr. MAGEE. Who was he?

Mr. HYDE. His name was Brown; he was a sergeant there.

Mr. MAGEE. Where is his home?

Mr. HYDE. I don't remember; somewhere in the West.

Mr. MAGEE. Do you know his address now?

Mr. HYDE. No; I do not; he belonged to my squadron, the Four hundred and sixty-fourth.

Mr. MAGEE. Did you become very well acquainted with him?

Mr. HYDE. No.

Mr. MAGEE. You don't know his address?

Mr. HYDE. No; except he was from the West.

Mr. MAGEE. Did you report this to any of your superior officers?

Mr. HYDE. No.

Mr. MAGEE. These charges were from civilian stores?

Mr. HYDE. Yes, sir.

Mr. MAGEE. When did you first report that to anybody?

Mr. HYDE. Not until I sent a letter to Representative Frear.

Mr. MAGEE. Why didn't you report it to your superior officers?

Mr. HYDE. Because I took it for granted they knew it; they were in the office all the time.

Mr. MAGEE. Who were in the office all the time?

Mr. HYDE. About a half dozen officers, and Lieut. Disque; he was there also.

Mr. MAGEE. Is he any relation to the colonel?

Mr. HYDE. Yes; either a son or brother; I have not found out.

Mr. MAGEE. Did you have any further conversation with anybody in the establishment about it?

Mr. HYDE. Just to this civilian pricing clerk. I used to tell him and Brown that some of the requisitions were padded, and one time this pricing clerk smiled and he said that Porter Bros. added 23 per cent to that; he told me that Porter Bros. would have his clerk price their stuff and add 23 per cent to that.

Mr. MAGEE. Were those supplies ordered for feeding the men at the expense of Porter Bros.?

Mr. HYDE. Porter Bros. charged the men \$1.05 a day.

Mr. MAGEE. For what?

Mr. HYDE. For feeding the men.

Mr. MAGEE. So much a meal, is that the idea?

Mr. HYDE. We were allowed \$1.05, in case we missed three meals: they deducted at the rate of \$1.05 a day from our wages, and we would get credit. If we missed five meals, we would get credit for one day.

Mr. MAGEE. That is what the men had to pay Porter Bros.?

Mr. HYDE. Yes, sir.

Mr. MAGEE. And Porter Bros. would settle with the Government for feeding the men.

Mr. HYDE. We also got our rations from the Government: those rations were also deducted; usually amounted to about \$9 or \$10. At first we were given that ration money, and later it was deducted from our wages, and they got the benefit of it also.

Mr. MAGEE. Clothing was purchased by the men from Porter Bros.?

Mr. HYDE. Yes, sir.

Mr. MAGEE. Did the Government have anything to do with that?

Mr. HYDE. Nothing at all.

Mr. MAGEE. Was some of these higher prices charged on the clothing, too?

Mr. HYDE. Yes; the men all complained the prices were exorbitant: We understood they were to be 10 per cent above cost. We were told to keep them a little bit lower than the prices in our home towns. Mr. Brown was well acquainted with prices, and Mr. Smith used to ask him; that is Sergt. Brown.

Mr. MAGEE. And Porter Bros. got the benefit of this amount that is, did the Government have to repay any of it?

Mr. HYDE. On the clothing?

Mr. MAGEE. Yes.

Mr. HYDE. Why, I understood that Porter Bros. made the entire profit on it.

Mr. MAGEE. Did the Government repay anything on the food other than the \$1.05?

Mr. HYDE. That is all, the Government paid for the food; that is, Porter Bros. would charge it to the Government, as they purchased the food, it was a part of their expense.

Mr. LEA. Then the \$1.05 only had to do with what the men paid and did not have anything to do with what it cost the Government?

Mr. HYDE. I don't think so. The Government paid the total cost, whatever that was. Of course, it would be a little bit less, I suppose.

Mr. LEA. Do you know how much Porter Bros. & Co. were allowed by the Government on account of that?

Mr. HYDE. No; I haven't any idea. I was told at one time Porter Bros. were making 5 cents a meal per man.

Mr. LEA. Are you sure whether the Government allowed Porter Bros. anything for the support of the men?

Mr. HYDE. No; I am not sure.

Mr. LEA. Now, about your knowledge—

Mr. HYDE. All I know was, there was just a lot of rations paid by the Government, and that was deducted. It averaged between 40 and 42 cents a day, the Government allowed us that for rations. When we first came there we were supposed to get the benefit of those rations. Porter Bros. was supposed to charge \$1.05 a day; so we are really supposed to pay the difference. And later on some of the civilians complained that they were retaining the ration money and that they were getting more than they were, and so we turned over the \$1.05 rations to Porter Bros., so we were really paid \$1.55 a day.

Mr. LEA. Now, whenever the goods were dropped by the side of the road by the teamsters you only know what you were told about that, do you?

Mr. HYDE. No; I heard that from the men themselves.

Mr. LEA. That is what I mean, and the teamsters.

Mr. HYDE. Yes; they told me.

Mr. LEA. What reason did they give for throwing these goods by the side of the road?

Mr. HYDE. They became stuck, and they said it was impossible to make it.

Mr. LEA. Was that in wet weather?

Mr. HYDE. It was always wet weather. The mud was 2 feet. There was not less than 2 feet of mud.

Mr. LEA. Do you know whether they were seldom recovered?

Mr. HYDE. No; they were seldom recovered. They slid in back of them like that.

Mr. LEA. Did you ever see any of these goods yourself?

Mr. HYDE. No; I never did.

Mr. LEA. Did you know that they were dropped?

Mr. HYDE. I knew that there were shortages, and the camp foreman would complain. They complained to me sometimes.

Mr. LEA. When there were shortages did you have anything to do with the adjustment of shortage matters through the camp that they were finally adjusted?

Mr. HYDE. It either comes to me or Mr. Smith, and I take it up with Mr. Smith, and I check up the invoices or deliveries that they were billed to the clerks.

Mr. LEA. You billed them for the total amount delivered to the teamsters?

Mr. HYDE. Yes.

Mr. LEA. And then a report would come that they had not received all they billed?

Mr. HYDE. Yes, sir; and then I would get out a statement to the shipping clerk and ask him if he put all on the slip.

Mr. LEA. Do you know whether any adjustment was finally made—

Mr. HYDE. There was none at all.

Mr. LEA. Of those goods, or not?

Mr. HYDE. The men were out and they got so much less.

Mr. LEA. The men—

Mr. HYDE. The soldiers—I mean the men in the camp.

Mr. LEA. In the camp?

Mr. HYDE. Yes.

Mr. LEA. Do you know that, or is that simply your conclusion? How long did you remain in this price-fixing business?

Mr. HYDE. I stayed there only about two weeks.

Mr. LEA. Do you know what occurred after you left there?

Mr. HYDE. Only from hearsay. I know that occurred until there was trainloads running, and then they sent this out on the train and this did not occur.

Mr. LEA. About the adjustments, did you know anything about what occurred after you left?

Mr. HYDE. No; not after I left; during those two weeks—it was almost three weeks.

Mr. LEA. Did you know of any instance in which the teamster-made trips back and recovered goods?

Mr. HYDE. Some of them did; yes, sir; that is, some of them told me they did. Others would not take the time.

Mr. LEA. I think that is all. Just a minute. You spoke about prices being marked on the goods. Whose prices were marked on the goods?

Mr. HYDE. That was on the mackinaw. They were selling some mackinaws for \$8 and \$10. They had a price marked; a little piece of cloth with "\$5" printed on, in the inside of the collar.

Mr. LEA. That was a transaction with which the Government had nothing to do?

Mr. HYDE. Nothing to do with. Of course, it excited the men and they complained about it to their commanding officers.

Mr. LEA. Was that a printed price or handwriting?

Mr. HYDE. That was a printed price, sewed right into the mackinaw. Their instructions were to charge just a little bit less than surrounding cities there.

Mr. LEA. That is, the men got them a little cheaper than at the ordinary retail stores?

Mr. HYDE. The ordinary retail price; yes. In some cases they charged just as much, but they usually were just a little bit cheaper.

Mr. LEA. Did you have any trouble with any of your officers there?

Mr. HYDE. No; not at all. The officers all did the best they possibly could do there.

Mr. LEA. How is that?

Mr. HYDE. I think the officers all did the best they possibly could, as far as I know; they all worked hard.

Mr. LEA. I suppose you were not familiar with the lumber industry before you went out there, were you?

Mr. HYDE. No; nine-tenths of the men were not.

Mr. LEA. The clearing of this acre of land; did you see that work?

Mr. HYDE. Yes; I was there almost every day during that period.

Mr. LEA. For what purpose was it used?

Mr. HYDE. They ran the railroad—the main line ran through there.

Mr. LEA. What was the character of the timber that had to be grubbed out?

Mr. HYDE. Small spruce there and fir, and that is about all; just spruce and fir. The small trees, they had to grub them out. They didn't use but very little dynamite there at that time.

Mr. LEA. What made it cost so much? Because the men were not working, or didn't have enough dynamite?

Mr. HYDE. They had enough dynamite. I guess sometimes the men did not work very hard if they were not pushed hard. Sometimes they would not have enough steel there, and other things. The foreman would tell them to lay down, and they did not work.

Mr. LEA. You never laid off during that time?

Mr. HYDE. No; I was a surveyor; I was just beyond there.

Mr. LEA. Did you actually know how much it cost to grub that acre?

Mr. HYDE. No. Mr. Cunney was foreman at that time. He thought it cost the Government probably \$3,000 or over \$2,000.

Mr. LEA. Was the grading done at that time?

Mr. HYDE. No; it was done at another time. The grading cost a little more.

Mr. LEA. I believe that is all.

Mr. FREAR. Is there anything you want to testify further—anything of interest?

Mr. HYDE. There was one remark about how Porter Bros. obtained that job out there. I remember Joe Porter stating this at one time, that they have built several cantonments, that they had sufficient money to swing it, and for that reason the Government turned that job over to them, because they had enough money to swing it. There was another rumor there that Mr. Gean was selling some of the timber at Portland—

Mr. FREAR. Was it only a rumor, or something you knew about?

Mr. HYDE. No; only a rumor.

Mr. FREAR. Then don't give it, if you have no knowledge of it.

(Witness excused.)

TESTIMONY BY THOMAS D. PERRY.

(The witness was first sworn by Chairman Frear.)

Mr. FREAR. Where do you reside, Mr. Perry?

Mr. PERRY. Grand Rapids, Mich.

Mr. FREAR. What is your business?

Mr. PERRY. I am vice president and manager of the Grand Rapids Veneer Works.

Mr. FREAR. Do you know anything about the spruce problem?

Mr. PERRY. In connection with the Grand Rapids Veneer Works, we operate perhaps the largest company in this country, building one of the dry kilns; and I was frequently called to Washington by members of the Aircraft Board for consultation on the building of lumber dry kilns and the operation of kilns, in order to get this spruce out as quickly as possible and with as little impairment as possible in artificial drying.

Mr. FREAR. Now, what is there about it.

Mr. PERRY. My original connection with this came from an early conference with Mr. Sligh, when he asked me whether spruce lumber could be artificially dried green from the saw and be as good as the air-dried lumber, which up to that time had been used as a standard for strength. This was about the time Mr. Sligh was conducting his own experiments in his own plant. Mr. Sligh had known of our company even before my connection with it and felt that if anyone could dry the lumber, we could. I told him I felt sure that it could be dried, and I would conduct a series of experiments to inform him along that line. I ordered a considerable quantity of various kinds of western and eastern and southern lumber by express prepared for a test at Grand Rapids, and at Mr. Sligh's suggestion, asked him and representatives of the Forests Production Laboratory at Madison and of the Bureau of Standards at Washington. I knew all the time that the forests production laboratory at Madison were very anxious to promote a dry kiln. That was their pet hobby, and the facts revealed that. They finally very reluctantly attended the test.

In order to have an unimpeachable computation as the result of this test after the lumber was dried in regard to its strength, we submitted the samples after they had been dried in our kilns under our conditions to the Forests Products Laboratory for their analysis of the results. They were very slow in getting out the results, because they did not want to discredit their own kiln or their own previous statements. The test was conducted—after Mr. Sligh's request in June—from July 27, 1917, on into the first part of August. The results of the test, which Mr. Sligh and nearly all of the aircraft manufacturers wanted for their use, was not sent us until the 17th of May, 1918. I have the official copy of the report here bearing that date. The whole proposition was one of endeavoring to utilize a Government laboratory kiln for all aircraft work, Government-conceived policies of operation, rather than take a kiln which had been on the market and had been proved practical by all kinds of woodworkers. We had built at this time about 1,600 dry kilns in this country. The result to the Government was to require the installation of a kiln that cost 50 per cent more to install and dry lumber half as fast as we could supply. The Government's own test—the Government's own computations—prove lumber dried in our kilns excelled their ar-

dried standard by from 20 to 60 per cent; better than they required. I have the various figures here and the different scientific terms.

Mr. FREAR. Is that a copy or is that the original?

Mr. PERRY. This is a compilation that I made or I had made in our office of their report; because their own report was not expressed in comparative terms.

Mr. FREAR. Do you want to put that in evidence?

Mr. PERRY. I should be glad to supply a copy of it for you in evidence.

Mr. FREAR. Supply a copy of it. That is, a copy of the Government's report.

Mr. PERRY. A copy of my résumé of the Government's report.

(The said document was marked by the reporter for identification "Perry Exhibit 1, August 11, 1919.")

I was in close touch with all the artificial drying that was done in aircraft plants all over the country. In fact, our company assigned me to that work for the period of the war, and I was familiar with this work done in this so-called timber kiln.

Mr. FREAR. How do you claim the Government did there with the lumber?

Mr. PERRY. The Government decided in the six months to make similar—I won't say similar—tests. In the six months' tests, a good deal of the tests in every portion of the country, the slowest and most expensive kilns were built there at Vancouver at the barracks.

Mr. FREAR. Did they attempt to dry it out there?

Mr. PERRY. They tried to dry it out there. We had a man at Seattle, Wash., and they said these were not wanted. They said they would rather take a kiln manufactured by a Government laboratory, in which there was no chance for any private individual to make any profit. In fact, all our work in our Government dry kilns was less than the normal profit. It was a case where we gave our services and we were glad to give it.

Mr. FREAR. Your contention is that the use of a kiln used by the Government was much slower in point of operation?

Mr. PERRY. Yes, sir.

Mr. FREAR. And cost more?

Mr. PERRY. And cost more, as shown by the tests. It was a contention that was shared by nearly all of the practical aircraft manufacturers. There were several instances where we were asked to build a kiln that had the features of the Government kiln, of the Tiemann kiln, as well as the Grand Rapids kiln, that you might call a bisexual kiln; it had both features. In every instance the practical manufacturer chose our method rather than the Government's.

Mr. FREAR. Who chose it?

Mr. PERRY. The practical aircraft manufacturers, such as the Aircraft Co. of the New Jersey; Gallaudett people of East Greenwich, R. I.; Alexandria Aircraft Co., of Alexandria, Va.; Thomas Morse Aircraft Co., of Ithaca, N. Y.; West Virginia Aircraft Co., of Wheeling, W. Va.; and a good many other plants where aircraft work was taken as a war measure, as was the case of Grand Rapids. I call to mind those particular plants that built special aircraft kilns. I should add the West Woodworking Co., of Chicago, to that list in its proper order.

Mr. Tiemann is the wood tester at the Forests Products Laboratory at Madison. He is an excellent student; knows wood thoroughly. He has never been in the practical world. He has never had to make a piece of equipment, produce a profit. He has never had to install it on contract. His decisions with regard to the method of building and installing these kilns were changed all the time. We could not be sure a kiln built one day would suit him the next day.

Mr. FREAR. Well, did he operate these kilns at Vancouver Barracks?

Mr. PERRY. He claims to have done it, and one of his assistants claimed to have done it; and they both hate each other like cats and dogs.

Mr. FREAR. Is it your contention that they did not perform the work?

Mr. PERRY. They did not perform the work, and they cost much more than was necessary in order to have similar service.

Mr. FREAR. That is when the product was sent from Vancouver Barracks?

Mr. PERRY. It was not so much it was sent out in improper condition as it was that the capacity of the plant—the output—was very limited, and the cost of operation very high.

Mr. FREAR. Well, did it have to be kiln dried somewhere else when sent from there?

Mr. PERRY. No, sir; but they ought to have gotten out in the kilns they built about three times as much lumber as they did. Our drying period was 10 days; and the best information I have had, by hearsay, from Vancouver, 25 days. I have not been there, but we have a report from our western representative.

Mr. FREAR. Well, your own knowledge.

Mr. PERRY. We have a western branch from which I have full reports, and the record of Tiemann kilns that I personally verified at the Dayton-Wright plant at Dayton, Ohio, was 38 days.

Mr. FREAR. What I mean to say, Is it your contention that the product was sent from the kilns at Vancouver in an unsuitable condition?

Mr. PERRY. No, sir. I claim that——

Mr. FREAR. The contention is that it cost more——

Mr. PERRY. And produced less.

Mr. FREAR. And resulted in material delays.

Mr. PERRY. Resulted in material delay. And in the building of kilns that did not represent the best art at the time.

Mr. FREAR. Any further facts you want to submit to the committee?

Mr. PERRY. I should be glad to have any questions the committee asks. I have the airplane specifications here which were framed up on such a basis as to cause this unnecessary delay.

Mr. FREAR. What do you mean by that; excluding companies like yours?

Mr. PERRY. No.

Mr. FREAR. In what way?

Mr. PERRY. Retarding the drying, it requiring such low temperatures as to delay drying three time longer than necessary. Their final temperature which they allowed was 145 degrees. The final

temperature which we used and which they passed as satisfactory was 170 degrees. The final temperature in the dry kiln is, as Mr. Sligh will tell you, the measure of its speed.

Mr. LEA. You think the speed with which it dries is unimportant, except the sooner the better?

Mr. PERRY. My contention there is that it was the Government's business to buy the dry kiln that impartial tests in their own laboratory showed dried the material safely and in the quickest time.

Mr. LEA. You did do drying work for the Government, did you, during the war?

Mr. PERRY. We built probably 75 dry kilns for practically all of the aircraft plants in this country.

Mr. LEA. And when did you begin installing those plants?

Mr. PERRY. The first one we installed in the Curtiss plant at Buffalo in May, 1917.

Mr. LEA. And then you continued to install them after that, did you?

Mr. PERRY. Continued to install them after that until—well, my memory won't tell me just how close to the armistice, but until the summer before the armistice was signed.

Mr. LEA. How many did the Government install on their own account do you know?

Mr. PERRY. I think the battery at Vancouver Barracks was 24 dry kilns; very crudely built, and in a way that no engineer would construct them that knew anything of the process of lumber drying.

Mr. LEA. Were you out there when they were constructed?

Mr. PERRY. I offered to go out there and I offered to have our Seattle men come to Washington to do the job on a percentage basis; but they preferred to use their own laboratory men, who had no practical experience.

Mr. LEA. You were out there, though, were you, when they were constructed?

Mr. PERRY. No, sir.

Mr. LEA. How long was it after they were constructed before you saw them?

Mr. PERRY. I have my knowledge of the kilns as they were built, from our Western representative; he watched them all the time.

Mr. LEA. So you don't know that of your own knowledge?

Mr. PERRY. And except as I met him several times since that time.

Mr. LEA. As you are informed.

Mr. PERRY. Yes; as we get all our information of kilns built in this country. Perhaps I ought to add most of the kilns were not directly for the Government but were built directly under their specifications and of the different inspectors in the different aircraft plants in this country.

Mr. LEA. So that your kilns were satisfactory to the Government and to the Government inspectors?

Mr. PERRY. They repeatedly proved so. Of some 35 or more dry kilns that were used in Grand Rapids for aircraft drying, practically all were Grand Rapids kilns and practically all of them gave entire satisfactory results. I know of no lumber condemned.

Mr. LEA. Now, who made these tests on which the Government originally acted?

Mr. PERRY. They were made at the Forests Products Laboratory at Madison, Wisconsin.

Mr. LEA. At what date?

Mr. PERRY. They came to us—were mailed to us on May 17, 1918. The letter is signed by Mr. Butler, and the tests are checked by Mr. G. E. Heck.

Mr. LEA. Now, you began installing these plants the month after the war started, did you?

Mr. PERRY. Yes, sir.

Mr. LEA. And when did the Government first install any? This one at Vancouver?

Mr. PERRY. Well, that is a difficult question to answer, because plants like the Curtiss Aircraft at Buffalo and the American Propeller Co. at Baltimore were practically Government plants, although they traded under private names; and I don't know how far the Government dominated their management.

Mr. LEA. As I understand you, as I hear your testimony, that as a matter of fact your plants were installed before the Government installed any.

Mr. PERRY. Our plants—

Mr. LEA. Just after the war started.

Mr. PERRY. Our plants were installed by the practical manufacturers whenever we could get a job. We were out to get business and we sold every job that we could.

Mr. LEA. But the Government on its own account was not establishing any except at Vancouver, was it?

Mr. PERRY. The Government on its own account was consistently recommending against our dry kiln and in favor of their own kiln and withholding, as I claim, this report which justifies it.

Mr. LEA. But I was talking about the ones actually established.

Mr. PERRY. The only ones the Government actually built in their own name was at Vancouver.

Mr. LEA. And the Government tests were made by the Forests Products?

Mr. PERRY. Yes.

Mr. SLIGH. Let me also add that the Bureau of Standards made tests, and that they are also taken in connection with the Forests Laboratory, because I operated on that myself.

Mr. LEA. Of course, the subject of your criticism is that they should have adopted your plan from the beginning.

Mr. PERRY. No, sir. I don't put it on that—if you will pardon me.

Mr. LEA. I am not inferring anything improper.

Mr. PERRY. I would rather put that this way: My contention is that they should have had some record or practical experience in woodworking manufacture rather than to take, without any dilution recommendations of a laboratory who think and act and operate on laboratory plans without regard to either economy or efficiency.

Mr. LEA. Who did pass upon that matter for the Government?

Mr. PERRY. There were quite a number of representatives of the Aircraft Board in different plants, and in many cases the inspectors individually made his recommendations. Inspectors were frequently men hardly out of college, who did not know an ash board from a prestump. In many instances they tried to design their own dry kilns.

these youngsters from college, with rather sad results. My only contention is, and my only reason for wanting to appear here, is to point out the fact that practical experience was disregarded by the Government in securing results, on top of a demonstration that is entirely conclusive in their own words.

Mr. LEA. Well, of course, the doctors frequently disagree, even though they have practiced together a while. That is all.

Mr. FREAR. I suppose what you mean is, a lack of efficiency, which resulted in not only useless expense to the Government, but in material delay.

Mr. PERRY. In material delay, and the regret that the fellow who hopes to be patriotic sees any such terrible bungling over a thing that he has made a life mistake.

Mr. FREAR. You receive some recommendation, especially when the Government is admitting the value of your kiln.

Mr. PERRY. I would like to divorce your minds from this, any desire that I might have had for business. We were naturally out for business.

Mr. FREAR. Yes.

Mr. PERRY. But I am not saying what I say for that reason. I have a pride in my own trade and business. I like to see the best things done in that line. I honestly tried to render any service I could during the war to our people. Our company said, "Do anything you can without stint of expense to render service without regard to whether we get paid for it or not." And that is what I tried to do, and it was the hardest job I ever had to make any impression on any of these people who were in charge of that work.

Mr. FREAR. Well, of course, there are a good many subordinates necessarily. If you had come in contact with those higher up, you might have received some recognition.

Mr. PERRY. Well, I traveled all the aisles in Washington.

Mr. LEA. There are over 7,000 people had inventions in plumbing devices and air inventions to press on the people at Washington. Every fellow thought he had the best one.

Mr. PERRY. Well, I—

Mr. LEA. It is your child, and everyone thinks it is better than his neighbor's. The War Department is up against that. What we want is facts. We have to be just to those people.

Mr. PERRY. Yet we had something that had been a demonstrated success for 10 or 15 years. It was not a new experiment. It was not brought out by the war.

Mr. LEA. I am not casting reflections on that.

Mr. PERRY. I understand your point.

Mr. LEA. You see the other side of it.

Mr. PERRY. Oh, yes.

Mr. FREAR. Thank you very much for coming down.

(Witness excused.)

TESTIMONY OF MAJ. CHARLES R. SLIGH—Resumed.

Mr. LEA. You are the owner of timber out in Oregon and Washington, I believe you said.

Mr. SLIGH. I am at present in two companies that own nearly a billion feet of timber in Oregon and Washington.

Mr. LEA. You are, I suppose, conducting sawmills?

Mr. SLIGH. No; we are not. It is just a holding proposition. I was interested in a sawmill at Monroe, Wash., and also one at Everett, Wash., but I sold out all my interest in those. The last interest I had was about 1909.

Mr. LEA. You were actively engaged in operating these mills. were you?

Mr. SLIGH. No; my business is to manufacture the furniture. Those were investments I made as a side investment. They are both profitable. And we had an opportunity to sell out, and we sold at a good profit. I had been interested in sawmills in Michigan and in Mississippi and in Wisconsin and in Washington for the last—that is, up to that time I sold out—that was the last one. But I had previously to that for 15 years had an interest in other mills as we were using in connection with our furniture business.

Mr. LEA. What I was really getting at, I understood you were a practical logger; that is, a mill man.

Mr. SLIGH. Well, I am a practicable furniture manufacturer; and as I say, my interest, from my financial interest in these mills, familiarized me more or less with logging and with sawmill operations. I did not give them only incidentally my personal attention, because my larger interests were home.

Mr. LEA. And when did you enter the service?

Mr. SLIGH. I entered the service as a volunteer of the Aircraft Production Board on June 17, 1917.

Mr. LEA. You were a member of the Council of National Defense. were you?

Mr. SLIGH. No; I was not. The Aircraft Board was authorized by the Council of National Defense April 12, 1917, and Howard E. Coffin was made a chairman of that Aircraft Board, with authority to name the other members, and in June he called on me, as I had been recommended to him, and I took service with him on June 17 purely as a volunteer, and paid my own expenses.

Mr. LEA. What was your idea, as I understand, you gave them the wrong age?

Mr. SLIGH. I did not have to give any age when I went down there. I went into Plattsburg.

Mr. LEA. I see.

Mr. SLIGH. I drilled at Plattsburg in 1915 and they do not take anybody over 45, and so, of course, I, being over 45—but I never missed a drill and I never missed a meal, and there were a lot of fellows younger than I that did. But when I was asked to accept a commission by Col. Deeds, I gave my age as 52. I was older than that.

Mr. LEA. Were you acquainted with Col. Deeds before that time?

Mr. SLIGH. I had never before met him until I went to Washington.

Mr. LEA. And he, of course, took you on the recommendation of these other men.

Mr. SLIGH. As I say, I received my appointment or request to serve from Mr. Coffin, and he selected me; I never met him, either. He selected me because of my recommendations.

Mr. LEA. And did your relations with Coffin continue to be friendly until you severed that relation?

Mr. SLIGH. Exceedingly so, and they are friendly to-day.

Mr. LEA. Were they friendly with Gen. Squires?

Mr. SLIGH. Yes.

Mr. LEA. And to-day?

Mr. SLIGH. Yes, exceedingly so. Gen. Squires paid me the highest compliment for my record, which is the highest one of the Aircraft Board, in September, 1917.

Mr. LEA. So you are still friendly with Gen. Squires?

Mr. SLIGH. Yes, sir. I personally informed Howard E. Coffin and Gen. Squires, both of them, of Gen. Deeds's incompetency early in December, in my judgment. I had an hour and a half interview one day with Howard E. Coffin. He called me to his office and he locked the door and we were alone, and he wanted a statement of the situation, and I gave it to him, and I told him of Deeds's incompetency. He said, "Sligh, we have already discovered it, and we are looking for a successor." He said, "We have asked Mr. Stettinius to accept that position and he has agreed to and his name was presented to the Secretary of War, and the Secretary of War turned him down for political reasons." Those were Mr. Coffin's exact words. And they were still looking for a successor at the time I made this statement. Now, I did not know that, but they had already discovered it. Other officers, or there was Maj. Shepler and two or three other officers there had spoken; they had come to the same conclusion that I did, that Deeds was not competent, that he was not an executive.

Mr. LEA. Now, was this before or after the trouble arose between you?

Mr. SLIGH. This was after November 8, after I had been suspended.

Mr. LEA. November 8 was the first day that you had any intimation you were to be let out?

Mr. SLIGH. Yes, sir.

Mr. LEA. 1917?

Mr. SLIGH. 1917.

Mr. LEA. And was there any trouble that you know of between yourself and the other officers up to that time?

Mr. SLIGH. There never had been a word of discussion or dissension between us at all.

Mr. LEA. And you felt bitterly about that, did you?

Mr. SLIGH. I naturally did. I felt bitterly on account of the way it was done. Gen. Squires informed me himself later that he regretted it very much, and he said if it was not a necessity, he says he would not have done it that way. I went to Gen. Squires in regard to it. When I told Gen. Squires of Deeds's incompetency, he did not say aye, yes, or no. But that was early in December, and it took them a month or two after that before they found a successor. Mr. Potter was afterwards selected as the man succeeding.

Mr. LEA. Any time before you left or you were to be superseded, had you complained about Col. Deeds's incompetency?

Mr. SLIGH. No. No; I had not.

Mr. LEA. Now, to be candid, and without any reflection on you whatever, here is a feature that impresses me with your testimony, that you seemed to entertain a great deal of bitterness against men connected with the aircraft matters: Do you think you have carefully guarded yourself doing an injustice to them?

Mr. SLIGH. Suits for libel; I am financially responsible; if I have libeled them I am financially responsible. I have dared them to do it; they have not started any suit yet.

Mr. LEA. No, no. The thing is this: You stated conclusions this morning and applied harsh names to these men, and you exhibited a great deal of bitterness. Now, what I want to call to your attention is, do you think that you have carefully guarded yourself against being unjust, in your judgment?

Mr. SLIGH. I do absolutely. Some of these documents which I presented to you, and all of which, and a great many more that I have, I can verify the correctness of all of that. I had a method of getting information directly from the department for two or three months after I left.

Mr. LEA. Yes.

Mr. SLIGH. And I have got possession of a considerable number of official documents. And as far as the production is concerned, to which Col. Morely referred, I have a copy of an official report that was made to Mr. Coffin. I can substantiate every word that I am telling you. I am not guessing.

Mr. LEA. The production is stated, and that will be a certainty.

Mr. SLIGH. Yes. I stated the production not only did not increase, but it radically decreased.

Mr. LEA. In that connection it occurred to me that your parting with the service in November, at the beginning of the dead of winter, would not the fact of winter conditions account for the difference in production?

Mr. SLIGH. It would if it had not been for the fact that Col. Disque had at his command a large army, which if they had knowledge and worked intelligently, would more than overcome the weather. I wrote a letter to Mr. Coffin, calling his attention to the fact that the weather conditions would be such that after the 1st of December, that unless provisions were made to take care of it, there would be a reduction on account of the weather conditions. I have sent you a copy of that letter.

Mr. LEA. Of course, production would be curtailed on account of the weather?

Mr. SLIGH. There are some sections where the winter does affect it, and other sections where the wet weather makes it impracticable to take logs, particularly from a commercial standpoint, but not where a man has an army to do it with, and this condition would more than offset the weather conditions.

Mr. LEA. It is a matter of common knowledge, is it not, that the winter of 1917-18 was an unusually severe winter and that retarded production in all lines in this country?

Mr. SLIGH. I am not prepared to say that.

Mr. LEA. What was the maximum production you secured in one month?

Mr. SLIGH. That was in the month of February; Mr. Hawkins whom I appointed to that position, in control out there, and he did:

remarkably efficient work. He was appointed early in October, and his production in the month of October was 3,545,000 feet, and his production was 4,100,000 feet in November. The difference between Col. Disque and myself is, that when I took charge of it I looked for experts to look after the business. I took Mr. Perry because he was connected with the largest kiln-drying business in the country and knew his business, and when I selected a man to do the work out there I selected Hawkins, with 20 years' experience. Mr. Morley has acknowledged that when he went out there he did not know anything about it, and Col. Deeds did not know anything about it, and Lieut. Col. Hitchcock was ignorant, and every single man that they put on the job was incompetent, they didn't know their business, and some of them don't to-day; and that is the difference between the operations I would have conducted and what Col. Disque did conduct. We got a large increase during the last two months of our administration, and if you will follow down Col. Disque you will find that it fell down to two and a half million the first month, 2,000,000 the next month, just as soon as Col. Disque took hold of it. Mr. Morley has stated there was a considerable quantity; he didn't give any figures; I do not think he knows. As a matter of fact, Col. Disque made the statement in his own report that he was going to produce 10,000,000 feet of stock to take care of the wants of the service until the regular production was produced, and that was made early in the season. As a matter of fact, his total production for December, when he assumed control, was 2,500,000, for January, 2,000,000, February 2,000,000, and for March 1,500,000 of stock, and in all did not equal 10,000,000 feet; that was for rive stock. The rive-stock proposition was a failure and so acknowledged by himself and discontinued because it cost an untold amount of money.

Mr. LEA. How much time did you spend out there?

Mr. SLIGH. Not any.

Mr. LEA. You were out there afterwards?

Mr. SLIGH. The 1st of last May, two or three weeks in April and May; on account of my interests there, I had spent for the 10 years previous to that a great deal of time, on account of my sawmill interests and timber interests, and I have traveled by horseback, automobile, and on foot all over the country, and I knew the conditions, I did not have to go out there.

Mr. LEA. Following up this question of production: Are you familiar with the figures on production for the summer and fall of 1918? What was the maximum production; do you know the figures?

Mr. SLIGH. Mr. Morley, in his testimony, spoke repeatedly of spruce. The spruce production was nominal as compared with the fir. We succeeded in September of 1917, in having fir substituted for spruce in any part of a machine—it could be used in any part of the machine—and most of the production which Mr. Morley referred to as spruce was fir, and not spruce at all.

Mr. LEA. You have not the figures for the production in the summer and fall of 1918?

Mr. SLIGH. I have the figures up to the 1st of May or 1st of June at my office; after that I paid no attention to it; the figures were furnished to me from the official reports.

Mr. LEA. I understood you to say this morning that you conferred with the foreign representatives; is that right?

Mr. SLIGH. That work was entirely in my charge.

Mr. LEA. Did our allies have men in this country who conferred with you?

Mr. SLIGH. Yes, sir.

Mr. LEA. Were they experts?

Mr. SLIGH. They were experts; one of them, Lieut. Dureth, of the French mission, or commission—they all had men, all the Governments had representatives at Washington, who were representing the purchasing department. Lieut. Dureth of the French mission told me that his Government looked upon the—this was after I had left at that time—looked upon the work of Col. Disque as a joke, and they didn't look for any results. Gen. Carmack of the English Army was the head of the British, and Maj. Pomilio was the head of the Italians. They all had their offices in Washington, and it devolved upon me to carry on negotiations with them and to get their cooperation with the plan I presented. I personally furnished the contract with the three Governments by which contracts were made for the spruce and fir and the lumber which we furnished to them. They were all represented in this international conference, and I was on intimate terms with all of them. I have letters from two of them expressing their regrets that I was to leave the service, which came after they found it out.

Mr. LEA. When the strike occurred in 1917, do you recall what month that was?

Mr. SLIGH. That was about the 20th or 25th of July, of 1917.

Mr. LEA. What did the strikers demand?

Mr. SLIGH. It was an I. W. W. proposition pure and simple, and they demanded a large increase in pay, and an eight-hour working day, and they demanded clean bunks, which was a proper demand, and which was afterwards conceded; demanded better food, I think, and a lot of things of that sort; the I. W. W. was an organization which was violently opposed to the American Federation of Labor, and they were getting the upper hand in that part of the country and Mr. Gompers wanted them attended to.

Mr. LEA. Were they dealt with as I. W. W.'s, or a labor organization?

Mr. SLIGH. As I. W. W.'s. Gov. Lister sympathized with them for political reasons and did not attempt to suppress their outrages, while the governor of Oregon did; there was no trouble in Oregon: the only shortage in Oregon was the natural shortage of labor. If Ole Hansen had been governor of Washington at that time, we would not have had any trouble.

Mr. LEA. When this strike was finally settled, did the men continue to work until you terminated your services with the Government?

Mr. SLIGH. In the logging camps they were abandoned, and sawmills shut down for several weeks.

Mr. LEA. Up to the time of your resignation?

Mr. SLIGH. No; the sawmill men got together and they finally overcame their strike, and we resumed normal conditions about the 1st of October or latter part of September.

Mr. LEA. What compensation was finally agreed to be paid the laborers?

Mr. SLIGH. That I don't know.

Mr. LEA. You did not have the adjustment of that?

Mr. SLIGH. I had nothing to do with that. Our contracts were with the sawmill men at a stipulated price, and that is what should have been followed. If the price was not large enough, to give them more; but our price for the No. 1 quality, which went in any part of a machine, was \$105, and the maximum price of wing beams was \$150. They made the price themselves and we accepted it, which was fifteen or twenty dollars more than they could get for the identical stock sold to the brokers.

Mr. LEA. Do you know what the total production was up to the time you left there?

Mr. SLIGH. From when?

Mr. LEA. Say from the beginning of the war?

Mr. SLIGH. That would be a very difficult thing, and I don't believe anybody knows; all the spruce that had been produced previous to that time had been sold to the brokers and then resold to the foreign representatives, to the L. W. F. Co., the Dayton-Wright, and smaller manufacturers. There were only a few purchasers in the United States at that time.

Mr. LEA. While you were in charge, do you know what the total production was?

Mr. SLIGH. Yes, sir.

Mr. LEA. How much?

Mr. SLIGH. The total production in the month of July—

Mr. LEA. I mean for the whole period?

Mr. SLIGH. Of spruce?

Mr. LEA. Yes, sir.

Mr. SLIGH. Up to the time we entered there was a great deal of stock manufactured, that was their standard manufacture, and a lot of them did not recognize our specifications; in August and September they had these contracts with the mill and insisted on fulfilling them, and they kept on sawing the "G" stock, and that is why we entered there the purchase of the No. 1 stock.

Mr. LEA. This was a more severe requirement, it called for a higher grade?

Mr. SLIGH. Yes; but we were paying the higher price, we paid all they asked, from 15 to 20 dollars more than they had been receiving for the same quality of stock previous to that. After we commandeered it, we served notice on them that they must confine their cutting to our specifications, and if they didn't, there would be trouble, and they did, to the extent they could get it, the No. 1 and the wing beam, during the balance of September and October, and for all shipments which were produced through Russel Hawkins as the manager there, and who worked intelligently and knew his business, was our specifications and not "G" list as intimated by Col. Deeds and Mr. Morley.

Mr. LEA. Where was this lumber finally classified as to quality and grade?

Mr. SLIGH. When it got down to the airplane manufacturer, it was all scaled; one of the divisions was an inspection department, and they had inspectors, and there was a lot of them on the coast, and every

carload of the lumber sent out was inspected after we commandeered the stuff, according to our specifications.

Mr. LEA. Before you commandeered it, what was the rule?

Mr. SLIGH. It was made by the Pacific Coast Inspection Bureau, a bureau which they had out on the coast, and I think have now, an inspection bureau, that when a man sells lumber he sells it to be inspected by this inspection bureau, who are supposed to be impartial, who make a charge of so much a thousand for doing the work, and that is charged up against the manufacturer.

Mr. LEA. That is the ordinary commercial inspection?

Mr. SLIGH. That is the ordinary commercial inspection, and we utilized during my work there a large number of those inspectors, and utilized their talent and ability; we did not bring in novices who never saw a board rule. I have one letter that says one inspector did not know which end of the board rule to take hold of. We used men who had knowledge. When Mr. Hawkins took hold of the work in October, when he found donkeys that were idle he put them to work, and it was because the work was done intelligently and energetically that he succeeded in getting the remarkable results in October and November, and if they had let us alone, we would have doubled it.

Mr. LEA. How do you account for the large amount of rejections in the East?

Mr. SLIGH. I am glad you asked that question; it was not during my régime; it was afterwards, when Col. Disque—up to the 1st of May Col. Disque had gotten practically no results. He had shipped 8,000,000 feet, including the month of March, and Gen. Carmack claimed he was not getting results, and he left for Washington early in May, and he was on the carpet, and I have been told he had a very uneasy time of it, and I believe it; and when he went back to Portland, he gave orders to produce and ship out stuff, and it didn't make any difference much what the quality was, and this G-list stuff that was shipped out was under his control and management; and these articles which I submitted to you from the Grand Rapids Aeroplane Co., which shows about 80 per cent of G-list and inferior was shipped under Col. Disque, because the Grand Rapids Aeroplane Co. did not get a contract until the latter part of March, and of every foot of this 6,300,000 feet, only 20 per cent was good and that was shipped under Col. Disque's régime.

Mr. LEA. I suppose there is a definite record of the rejections of spruce?

Mr. SLIGH. There ought to be. We kept records while I was in Washington, but if they have been moved to Portland, the Lord only knows where they are.

Mr. LEA. Were there any soldiers there when you left?

Mr. SLIGH. Yes; I resigned on January 19, and had nothing to do with the service after December 7.

Mr. LEA. When did the soldiers begin going there, do you know?

Mr. SLIGH. They commenced sending them out there in December; about Christmas time they had about 2,500, and the number was rapidly increased until he got an army of three or four brigades.

Mr. LEA. Now, you spoke of a letter of Mr. Leadbetter's about the property at Vancouver. Did you give that letter to Mr. Frear?

Mr. SLIGH. No; I will give you a copy before you leave.

Mr. LEA. Could I see a copy of it now?

Mr. SLIGH. Yes. [Producing copy.]

Mr. LEA. Was the contract made that this letter refers to?

Mr. SLIGH. Where he wanted to sell?

Mr. LEA. I understand this letter refers to some contract he wanted to make. Was the contract made?

Mr. SLIGH. No; this letter was written to a friend of his, Johnson, that he wanted to sell this sawmill property to, and one of the inducements was that he could sell his product to the cut-up plant.

Mr. LEA. Was anything purchased of Leadbetter—any timber or lands?

Mr. SLIGH. If it was, it was purchased after I left, and I have no knowledge of it.

Mr. LEA. So far as you know, there was no purchase made of Leadbetter?

Mr. SLIGH. No, sir; I could not say there was. This is a copy of the paper which I was requested by Mr. Charles E. Hughes to submit to him, which I did.

Mr. LEA. You were a witness before the Hughes investigation?

Mr. SLIGH. Yes, sir.

Mr. LEA. At Washington?

Mr. SLIGH. At Washington. There is the letter in which he has offered to sell that property to Johnson for \$150,000, and I think this paragraph is the one he refers to [indicating].

Mr. LEA. That is this paragraph here on page 2; that is the one which you have reference to?

Mr. SLIGH. Yes. Leadbetter was the man who was making the contracts at that time; he was trying to sell this property to the man, and he held out the inducement of making the sale that he could sell his product to the cut-up plant.

Mr. LEA. From whom did you get this letter—from Mr. Johnson?

Mr. SLIGH. I would not dare to tell you who I got it from. I had several sources of information after I left there. I had several loyal friends, who were very much incensed at the action taken, not only one but several of them, and they gave me a great deal of information afterwards. They thought it might be useful at some time.

Mr. MAGEE. We will put this letter in the testimony, letter from Leadbetter to Johnson [reading]:

WASHINGTON, D. C., December 26, 1917.

Mr. WILLIAM PIERCE JOHNSON,
Alaska Building, San Francisco, Calif.

MY DEAR WILL: Thanks for your letter of December 20, and I am glad you have got your lumber matters satisfactorily settled.

Within the last few days I have had several telegrams relative to the sale of the Vancouver Mill property. It seems that this property was wanted for a ship building plant, and they offered \$150,000 for same without machinery.

I could not help but feel that at this time, in view of the great necessity for lumber, that this plant, which was designed with an idea of cutting up 125,000 feet per day, should not be dismantled, but should be completed along the lines contemplated, so that more spruce and fir could be produced rather than less.

In this connection, the thought came to me that McLellan & Levitte might at this time be more than glad to take over and operate this property, as its proximity to the now cut-up plant at Vancouver makes it especially available for this particular line of work, and it appeared to me that an arrangement might also be made whereby the materials not used in the cut-up plant could be used in the paper mills.

The plant at Vancouver, whereas you were probably told that it consists largely of junk, is really a very complete property, with the exception of the saw mill proper,

which is only a temporary mill, with a maximum capacity of 60,000 feet per day. The carriage, head blocks, gang blocks, gang edger and engines, however, are all suitable for use in a new plant; and the thought struck me that you might bring down from your Ocean Fall mill the machinery necessary to complete the installation, and have a plant capable of cutting on double shift any amount of stuff that you might get out.

It seems really almost foolish in view of the large prices that are being obtained for materials, to sell logs at even the high prices existing when they can be cut to so much better advantage. Then, too, the fact that the Government needs this material both for building ships and for other purposes, makes it really necessary that we should cooperate in every way possible to increase production; and the easiest method I know of is to start existing plants and furnish the raw materials for same. Everything connected with this plant was modern a few years ago. The water system would cost to-day at least \$20,000 to develop. There are 10 boilers installed ready to operate, an electric plant of 300 horsepower, complete battery of planers of all descriptions, together with resaws, sash gang, a large kiln capacity, with piles driven to double same.

It seemed to me that this would be a very central location for such a plant, as you can send your spruce clears to the Vancouver cut-up plant, ship timbers to adjoining yards, and your spruce for paper to either Oregon City or Camas, as appeared necessary. If run on double shift, and you needed more paper, this plant has the property and is designed for the purpose of putting a machine similar to the later machines put in at the Camas mills.

All of these matters are submitted for your consideration, and if they are in line with any ideas you have, the property can be bought; or, if preferred, to be operated as a separate organization, the present interests retaining half.

Sincerely, it seems to me that out of this great necessity for lumber which exists that everything we can do to increase the production of airplane stock of fir and spruce and materials for buildings ships should be done.

Yours, very truly,

F. W. LEADBETTER.

Mr. SLIGH. When I received a copy of that, I wrote to several friends of mine on the coast and asked them to look up that property and tell me what it is worth. I had three or four letters, and the price ran from \$15,000 to \$35,000; it had been abandoned for 10 years, and when I was out there the 1st of May, a year ago, I went to look at it myself, and I am pretty practical in those things, and I would not have given them \$10,000 for the whole thing.

Mr. MAGEE. How much land did it include?

Mr. SLIGH. About 2½ acres.

Mr. MAGEE. A small plant.

Mr. SLIGH. That is all.

Mr. MAGEE. Mr. Leadbetter was the owner of that plant?

Mr. SLIGH. It had been Leadbetter & Petteck, his father-in-law. It had been unprofitable, and it had burned, and it had been uncovered to take care of it.

Mr. MAGEE. How near is that to the Government cut-up plant?

Mr. SLIGH. About a quarter of a mile.

Mr. MAGEE. It is not used for any practical purpose to-day?

Mr. SLIGH. No. That statement about the shipbuilding company making that offer—they negotiated it, but did not make an offer.

Mr. MAGEE. I believe that is all; it is getting rather late.

Mr. LEA. Is there anything further, which you think will be of benefit to this committee in this investigation?

Mr. SLIGH. I want to call your attention to one statement that Mr. Morley made, and the only statement he made of actual figures—that they had reached a production of 20,000,000 feet for a month or so previous to the armistice being signed. Twenty million feet would have been enough lumber for 25,000 airplanes, at an average

of about 800 feet to a plane. As a matter of fact, on all the small planes, it took about 200 feet. On the big planes, that is, the Handley-Page, it took 2,558 feet; that was the largest one of them, and they averaged from that down all the way to 800 feet, that would be the average for the planes being made in the United States and Europe, a very conservative estimate. It was necessary for them to turn out 20,000,000 feet, because 80 per cent was not fit for anything.

Mr. LEA. Do you contend all this was worthless at the time of the armistice?

Mr. SLIGH. The Grand Rapids figures, which was all shipped under Col. Disque's régime, show 6,000,000 feet, out of which only 1,200,000 could be used. There was one carload they could not use at all, and it was shipped to Dayton-Wright.

Mr. LEA. Do you intend your statement as to the type of shipments that were being made to go clear up to the time of the signing of the armistice?

Mr. SLIGH. Yes, sir.

Mr. LEA. Do you know anything about the plane of our Allies?

Mr. SLIGH. I was intimately familiar with them all, at the time I left.

Mr. LEA. When did you leave, Major?

Mr. SLIGH. I severed my connection with the department on the 7th of December, 1917, although the order had been made on November 8, but Col. Disque sent Leadbetter down to San Diego to try and get men; I had taken this matter up with Col. Disque in the meantime hoping to have a favorable action on his part, which I never got; he regretted afterwards; so I kept in charge there up to December 7, of the wood section.

Mr. LEA. What were the demands of our Allies upon us up to that time?

Mr. SLIGH. The Italians had a program for 20,000 machines, France 11,000 per annum, and the English program was for 40,000 machines; that was 80,000, that was their program for the number of machines to be built that year.

Mr. LEA. Were they looking to us to supply the lumber?

Mr. SLIGH. Yes; the English were getting all produced in British Columbia, and at one of the sessions I was invited to, of the Aircraft Production Board, was for the purpose of explaining to Sir Joseph Flavelle, who was the head of the aircraft service in Canada, our plan for operation, which had impressed itself on Gen. Squires and Mr. Coffin, and they asked me to explain it to him, and I did, and a week later he sent an officer from Toronto to Washington for further information, he told me they had decided to adopt my plan for Canada.

Mr. MAGEE. That referred to the matter of getting out the timber.

Mr. SLIGH. Yes, the specifications and controlling it and inspecting it, etc. As far as the requirements were concerned, those were the requirements made by the various foreign missions.

Mr. LEA. Take the shipments in August to October, in 1918, any shipments made to manufacturers in this country.

Mr. SLIGH. Some of them were.

Mr. LEA. Take the lumber our Allies got; was that shipped to them?

Mr. SLIGH. That was shipped to their representatives.

Mr. LEA. Did you see any of the lumber that came to the factories—did you see any of it yourself?

Mr. SLIGH. Yes, I was up at Buffalo, at the Curtiss plant, and at the Standard plant in New Jersey, and at Dayton-Wright, the three largest at that time; and they personally informed me, President Flint of the L. W. F. Co., and one of the men of the Dayton-Wright, that they were getting out of No. 1 specifications a training machine out of 500 feet of lumber, instead of more than 1,000 feet; which it had required previously of the G list.

Mr. MAGEE. What date was that?

Mr. SLIGH. I was down at the Dayton plant about November 3 or 4, 1917. I was at the Curtiss plant at the time I went up there with a French engineer, Mr. Darmoy, to look at the Spad machine.

Mr. LEA. You say this percentage of worthless lumber continued up to the time of the armistice. I want to know whether that is your own knowledge or not?

Mr. SLIGH. I have submitted to you here a statement, copy of correspondence, that was addressed to the Grand Rapids Airplane Co., and their report, and the report of Col. Disque's own inspectors, who went there to reinspect that—saying they only got about 20 per cent of the stuff shipped there that was fit to use. There was Lieut. Porter sent by Col. Disque to Grand Rapids, one of the inspectors, and this was late in the season, and he personally informed me, and this was when Mr. Morley was there—this was Lieut. Porter himself, one of Disque's officers—they were shipping simply to get quantity, quality not considered, and the report verified it.

Mr. MAGEE. That is all, Major, and I thank you very much for your information.

Mr. SLIGH. I thank you gentlemen; you have been very courteous.

Mr. MAGEE. That will be all.

(The committee adjourned at 7.45 p. m. to meet at the call of the chairman.)

**SUBCOMMITTEE No. 1 (AVIATION)
OF THE SELECT COMMITTEE ON
EXPENDITURES IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Wednesday, August 20, 1919.**

The subcommittee met at 10 o'clock a. m. in the court room of the United States district court, Seattle, Wash., Hon. James A. Frear (chairman) presiding.

Also present: Hon. Walter W. Magee and Hon. Clarence F. Lea.
Mr. FREAR. The committee will be in order, please.

**TESTIMONY OF LIEUT. COL CUTHBERT POWELL STEARNS,
UNITED STATES ARMY.**

(The witness was duly sworn by Mr. Frear.)

Col. STEARNS. May I make an official statement for the record?

Mr. FREAR. The committee will undertake this investigation in its own way. If you desire to offer any remarks or present any information that is not brought out in the investigation, later on we will be glad to hear it.

Col. STEARNS. May I make an official request in a few brief words?

Mr. FREAR. Unless it is very brief, the committee would prefer to proceed in its own way. We have had before us the Secretary of War and the various generals, Menoher, Patrick, and other men in high positions; and no one has made such a request heretofore; and unless it is very material and very important, the committee would prefer to proceed in its own way.

Col. STEARNS. It is important and it is brief.

Mr. FREAR. It is important, possibly, in your judgment. I thing the committee had better proceed in its own way. Is this the letter you sent to me yesterday [handing letter to witness]?

Col. STEARNS. Yes sir.

(The letter above referred to was marked "Exhibit A, Stearns, Aug. 20, 1919," and is as follows:)

**WAR DEPARTMENT,
UNITED STATES SPRUCE PRODUCTION CORPORATION,
Yeon Building, Portland, Oreg., August 16, 1919.**

From: C. P. Stearns, lieutenant colonel, A. S., A. P., president.

To: The Hon. Joseph A. Frear, Hotel Seattle, Seattle, Wash.

Subject: Request to place all witnesses under oath.

1. It was noticed that during the Hughes investigation a great many men were called to the witness stand and gave their testimony without taking oath.

2. I know so well that our enemies will do all in their power to discredit our work that I feel it but fair to request of you to give us what benefit there might be derived from requiring every man to make his statements under oath.

3. As previously stated, we welcome this investigation and fear nothing from it except that it may not get at the full truth and I feel that putting all witnesses under oath will have a tendency to at least keep charges against the Corporation within the bounds of a man's honest convictions.

4. Trusting that my request may be complied with, I remain
Very truly yours,

UNITED STATES SPRUCE PRODUCTION CORPORATION.
C. P. STEARNS,
Lieutenant Colonel, A. S., A. P., President

Mr. FREAR. How did you come to write that letter to me?

Col. STEARNS. Because I heard from various sources that at the Hughes investigation all of the witnesses were not put under oath.

Mr. FREAR. How about the Ray investigation; how about Mr. Disque and some of the others?

Col. STEARNS. I do not know about that.

Mr. FREAR. That is the investigation that came nearest to your people out here and I supposed you would be very familiar with it.

Mr. STEARNS. I do not know whether they put all the men under oath or not. They put me under oath on several occasions. Whether he put all of the witnesses under oath I am not able to say, because I was not here all the time.

Mr. FREAR. Has anyone requested you to send this letter to us?

Col. STEARNS. No, sir.

Mr. FREAR. Has anyone requested you to ask why you should request it, either by letter or in person?

Col. STEARNS. It was suggested from various sources that in this investigation the witnesses be put under oath.

Mr. FREAR. Let us get definite information. Did Mr. Disque write you or ask you to make such a request of this committee?

Col. STEARNS. Yes, sir.

Mr. FREAR. Why did you not say so at first?

Col. STEARNS. Because he did not ask me to request it; he asked me to please have the committee——

Mr. FREAR. So this request did not come from you; it comes from Mr. Disque and you are simply acting as his agent?

Col. STEARNS. No, sir.

Mr. FREAR. When did you receive that letter from Mr. Disque?

Col. STEARNS. About a week or 10 days ago.

Mr. FREAR. What did he say to you in that letter?

Col. STEARNS. I do not remember exactly, except, among other things, to please see that witnesses were heard under oath, or word to that effect.

Mr. FREAR. He wrote you that, did he, that he wanted witnesses placed under oath?

Col. STEARNS. Yes, sir.

Mr. FREAR. Did he set forth the fact that when he testified in the Ray investigation he was not under oath?

Col. STEARNS. No, sir.

Mr. FREAR. He did not say anything about that?

Col. STEARNS. No, sir.

Mr. FREAR. Why did he make such a request of you; what is your understanding?

Col. STEARNS. I do not know that he was not under oath in the Ray investigation.

Mr. FREAR. Is there anything in the Ray investigation that indicates that he was sworn?

Col. STEARNS. No, sir; except that it is customary in the Inspector General's investigations for all witnesses to be under oath.

Mr. FREAR. I ask you if you know of your own knowledge whether he was sworn or not.

Col. STEARNS. No, sir; I was not present when his testimony was heard.

Mr. FREAR. Did not many witnesses heard there simply make statements, just as was done in the statement of Disque; did you not know that was a fact, in the Ray investigation?

Col. STEARNS. I did not know.

Mr. FREAR. You were interested in that at the time?

Col. STEARNS. Yes, sir.

Mr. FREAR. And you did not know whether or not the witnesses were all sworn?

Col. STEARNS. I did not.

Mr. FREAR. And you come before this committee now at the request of Mr. Disque to say that you want witnesses sworn?

Mr. FREAR. Well, they are all going to be sworn, but I just wanted to find out why you wrote such a letter to his committee, which was a very unusual letter.

Col. STEARNS. I told you because in the Hughes investigation I understood they were not sworn.

Mr. FREAR. Have you any complaint to make of the Hughes investigation?

Col. STEARNS. No, sir.

Mr. FREAR. The Attorney General of the United States and Mr. Hughes conducted that; do you question the investigation made by those gentlemen?

Col. STEARNS. Not in the least.

Mr. FREAR. Then why did you make such a statement; what did you mean?

Col. STEARNS. I mean, I happen to know there are certain men out here who are our enemies and I would like to have them under oath.

Mr. FREAR. You are doing this at the request of Mr. Disque?

Col. STEARNS. Not entirely; no, sir.

Mr. FREAR. Will you present the letter to the committee, in which he made that request?

Col. STEARNS. If I can find it I will.

Mr. FREAR. I trust you will. You have known Mr. Disque a good many years?

Col. STEARNS. Yes, sir.

Mr. FREAR. You served under him in the Philippines?

Col. STEARNS. No, sir.

Mr. FREAR. When did you serve with him?

Col. STEARNS. I served with him, not under him, as lieutenant in the Third Cavalry, Fort Sam Houston, Tex., about the year 1910 and part of 1911.

Mr. FREAR. That is the first place you met him?

Col. STEARNS. Yes, sir.

Mr. FREAR. He was then what?

Col. STEARNS. He was then a first lieutenant, or just about to be one. I am not quite sure. It was just before his promotion.

Mr. FREAR. That is, from second to first lieutenant?

Col. STEARNS. Yes, sir.

Mr. FREAR. And you were what?

Col. STEARNS. Second lieutenant.

Mr. FREAR. How old are you?

Col. STEARNS. Thirty-four years old the 14th of August.

Mr. FREAR. You were the president of the Spruce Production Corporation?

Col. STEARNS. Since the 1st of April last.

Mr. FREAR. You are in control of the entire business affairs of that corporation?

Col. STEARNS. Now?

Mr. FREAR. Yes, sir.

Col. STEARNS. Yes.

Mr. FREAR. That corporation has assets to what extent would you say?

Col. STEARNS. Will you let me get my statement?

Mr. FREAR. Surely. If you can not find the figures now we will pass that and you can insert the figures in your statement when the time comes. It runs into a number of millions of dollars?

Col. STEARNS. Yes sir.

Mr. FREAR. What was your business before you entered the service?

Col. STEARNS. I went from my father's ranch in California to West Point. I graduated from West Point in 1909. I went right into the service as second lieutenant and as second lieutenant in the Third Cavalry and have been in the service ever since.

Mr. FREAR. Where did you go when you were in the Third Cavalry—to Texas?

Col. STEARNS. I went to West Point in 1912 as an instructor.

Mr. FREAR. And then where?

Col. STEARNS. And then was ordered back to the Texas border after three years and a half at West Point as instructor, and was there nearly a year, and then was ordered to Hawaii.

Mr. FREAR. And how long were you in Hawaii?

Col. STEARNS. I was in Hawaii seven months, and then was asked if I would accept a majority in the Signal Corps.

Mr. FREAR. Asked by whom?

Col. STEARNS. The Adjutant General.

Mr. FREAR. He wrote you?

Col. STEARNS. He wired me.

Mr. FREAR. What time was this?

Col. STEARNS. That was in the latter part of October, 1917.

Mr. FREAR. War had then been on six months?

Col. STEARNS. War had been on and I did not mind accepting majority to get closer to the front.

Mr. FREAR. You were then captain?

Col. STEARNS. Adjutant of the Fourth Cavalry. I accepted as they said to report to Col. Disque in Portland from Hawaii.

Mr. FREAR. From Hawaii?

Col. STEARNS. From Hawaii. I reported there the first part November. He had not come back from Washington. He had

out on a trip to look over the situation and went back to make recommendations, and came out about two days after I got here.

Mr. FREAR. That was in 1917?

Col. STEARNS. That was in 1917. We opened the office the middle of November.

Mr. FREAR. He was a colonel then, Disque?

Col. STEARNS. Yes, sir.

Mr. FREAR. He asked to have you come here from Hawaii?

Col. STEARNS. Yes, sir.

Mr. FREAR. And it was largely through your previous acquaintance down in Texas, was it not?

Col. STEARNS. Yes, sir.

Mr. FREAR. You were engaged in the service entirely, that is, in the Cavalry, or some branch of the military service, entirely, during all this period that you speak of?

Col. STEARNS. Yes, sir.

Mr. FREAR. Were you in any commercial work; have you done any commercial business?

Col. STEARNS. No, sir.

Mr. FREAR. When you came to Portland and went in with Gen. Disque—by the way, where is Mr. Disque?

Col. STEARNS. You mean his business connection?

Mr. FREAR. Whereabouts is he?

Col. STEARNS. New York City.

Mr. FREAR. What are his business connections?

Col. STEARNS. President of G. Amsinck & Co.

Mr. FREAR. Could you give me his residence?

Col. STEARNS. Spuyten Duyvil, New York, just above Harlem.

Mr. FREAR. What is the address of the Amsinck Co.?

Col. STEARNS. 96 Wall Street.

Mr. FREAR. The same as the American International Co.?

Col. STEARNS. A subsidiary concern, I understand.

Mr. FREAR. Are Sims-Carey connected with it?

Col. STEARNS. You mean the corporation?

Mr. FREAR. Yes.

Col. STEARNS. Not in any way that I know of.

Mr. FREAR. You do not know of any connection?

Col. STEARNS. No, sir.

Mr. FREAR. What was your position when you first came to Portland?

Col. STEARNS. As soon as the general arrived he appointed me as adjutant.

Mr. FREAR. What other officers did you have?

Col. STEARNS. I was the only one—no; I will not say that. There were a couple of young temporary officers before he came.

Mr. FREAR. What force did you have at that time; that was in November, 1917?

Col. STEARNS. That was in November, and before the general came—then colonel—Mr. Hawkins, as I understand it, as a representative of the lumber department in Washington and was out here in charge of logging and milling.

Mr. FREAR. At Portland?

Col. STEARNS. Yes, sir; and he had assisting him a young man named Crisp, who was disbursing officer or contracting officer.

Mr. FREAR. How old a man was Crisp?

Col. STEARNS. About 30, approximately.

Mr. FREAR. Crisp was a man who signed all contracts that had been made here?

Col. STEARNS. Yes, sir.

Mr. FREAR. He was the man placed in authority to act in a \$35,000,000 contract?

Col. STEARNS. No, sir; those contracts were all signed by approval.

Mr. FREAR. But Crisp signed them?

Col. STEARNS. He signed as contracting officer under the general's direction. He did not sign the contracts of his own volition without authority.

Mr. FREAR. That is, of course, a matter of supposition; but I do not know how you could testify to that.

Col. STEARNS. He was simply designated as contracting officer: that was his designation to comply with the regulations in Washington providing for a contracting officer. There was another young man named Powell in charge of traffic matters, and both of those men were commissioned. There was another young man not commissioned who had charge of inspection. That was the force that the colonel found when he came.

Mr. FREAR. And were there any enlisted men at that time?

Col. STEARNS. No, sir.

Mr. FREAR. So that the force consisted practically of five officers?

Col. STEARNS. Yes, sir.

Mr. FREAR. In the Regular Army, were they?

Col. STEARNS. No; those other two were temporary officers who had just been appointed.

Mr. FREAR. Since the war?

Col. STEARNS. Yes, sir.

Mr. FREAR. And only three regular Army officers?

Col. STEARNS. Well, I was the only one at that time. Then they started coming after that every day.

Mr. FREAR. When Disque came he had been a Regular Army officer who had been out?

Col. STEARNS. Yes, sir.

Mr. FREAR. What position did you have, if any, after you were appointed adjutant?

Col. STEARNS. After the organization grew as the adjutant's duties could more and more be handled in a routine way and our office became more complex, it was necessary to have a chief executive. I mean, under the general. We had an entire organization, so we called that a chief of staff, and I simply stepped into that position with the duties which I had been fulfilling and gave my assistant the position of adjutant.

Mr. FREAR. When was that that you received the appointment?

Col. STEARNS. Approximately around the 1st of July.

Mr. FREAR. 1918?

Col. STEARNS. In 1918.

Mr. FREAR. Then from November to the 1st of July you were acting as adjutant?

Col. STEARNS. Yes, sir, approximately that date.

Mr. FREAR. And what was your rank during that time?

Col. STEARNS. Major.

Mr. FREAR. What rank was given to you in July?

Col. STEARNS. The same rank, and I was promoted in August to lieutenant colonel.

Mr. FREAR. That is, the next month?

Col. STEARNS. Yes, sir.

Mr. FREAR. What were your duties when you were given this position from adjutant to—what is the name of the position?

Col. STEARNS. Chief of staff.

Mr. FREAR. What were your duties?

Col. STEARNS. Very much the same as they had grown to be under that of adjutant, namely, practical command of all the troops except in so far as the policy of use of those troops was concerned.

Mr. FREAR. To what force of men had that grown, what military force at the time you were placed in charge as chief of staff?

Col. STEARNS. It was growing at that time from 10,000 to 30,000.

Mr. FREAR. Between ten and twenty thousand?

Col. STEARNS. It was increasing every day. I could find the exact number of men on a given date.

Mr. FREAR. That is not material. I just wanted to get the relative situation. What were your other duties?

Col. STEARNS. My other duties were to act as office executive, handling the organization, matters of office routine, taking not only all material routine duties, but coordinating the work of the production end. You see at that time our office became divided in two divisions, the military side and the production side. It was our ultimate aim—

Mr. FREAR. Just tell me what you did, not what was your aim.

Col. STEARNS. For several months I was executive of the military side and the production side. Later I turned those other duties, the production side, over to another man.

Mr. FREAR. In your connection with the production side, what did you do?

Col. STEARNS. I approved the matters that I did not think were sufficiently important to be brought to the attention of Gen. Disque.

Mr. FREAR. Suggest to the committee the general character of that work.

Col. STEARNS. And in his absence—

Mr. FREAR. Give us a suggestion as to the kind of matters that you decided, that is, where you exercised your own judgment as to whether you were to decide or whether the general should?

Col. STEARNS. Yes, sir.

Mr. FREAR. Let the committee understand what you did outside of the matters the general was to decide, what matters you would decide?

Col. STEARNS. In a general way, I can put it that all matters of execution I handled myself. Matters of policy, where he was present, I gave him to decide.

Mr. FREAR. Take the question of production. In the matter of execution what were the nature of your duties?

Col. STEARNS. Where there was any—the labor troubles, the dictating. For instance, we dictated the hours, conditions, and wages under which the lumber industry operated, at the request of the

operators and the employees. I can go into detail as to that if you want me to.

Mr. FREAR. No.

Col. STEARNS. That duty was assigned to me. Those matters, the wages that the camps were paying, too much or too little; if they came within the general's policy I handled all letters and all complaints of that nature myself.

Mr. FREAR. Did you pass upon them?

Col. STEARNS. I passed upon it unless it required a change in policy, and if it required a change in policy I referred it to the general.

Mr. FREAR. In other words, if a man was to get \$2 or \$5 a day you were the man that determined that.

Col. STEARNS. No, sir. There was a bulletin published which set forth our policies on that matter, and I simply saw that the mill and camps lived up to that bulletin.

Mr. FREAR. Who put out that bulletin?

Col. STEARNS. The bulletin was put out by the committee of loggers and lumbermen, approved by them and issued from Gen. Bisque's office under the authority given him by the loggers and lumbermen. Do you mean to say you had no discretion, as to that, you followed the bulletin in fixing workmen's compensation wherever it happened to be?

Col. STEARNS. Yes, sir.

Mr. FREAR. What was done with the soldiers' pay at that time? What rate of wages was fixed; what practice was brought about?

Col. STEARNS. I have not answered all of your other questions, if you want me to go further into it.

Mr. FREAR. No; that is sufficient for the present time.

Col. STEARNS. The soldier pay—would you like to know how that started?

Mr. FREAR. Yes, briefly; I think the committee would be glad to hear it.

Col. STEARNS. It was evident that there was a great shortage of labor here on the coast. That was the one difficulty in production. One of the general's recommendations—

Mr. FREAR. Gen. Disque?

Col. STEARNS. Yes, sir.

Mr. FREAR. When was Disque appointed general?

Col. STEARNS. In October sometime, I think.

Mr. FREAR. October, 1918?

Col. STEARNS. Yes.

Mr. FREAR. So he served as general about a month?

Col. STEARNS. I guess it was September. I am not positive; about a month or two months before the armistice was signed.

Mr. FREAR. Before that he was a colonel?

Col. STEARNS. Before that he was a colonel. His recommendation was to supplement the existing labor of the coast.

Mr. FREAR. When was this?

Col. STEARNS. That was before he came out permanently. He came out and made a trip and saw what was needed, got recommendations from loggers and went back and made his own recommendations then as to the situation to the Aircraft Board.

Mr. FREAR. That was in the late fall of 1917, the time you mentioned?

Col. STEARNS. Yes, sir. One of his recommendations was for increasing labor on the coast.

Mr. FREAR. That is, the number of men?

Col. STEARNS. The men, and to do that by soldier labor. The difficulty confronting him was to pay a man a soldier's wage and put him in a camp to work. When a camp was operated by private operator the result would be that financially the man who operated has a claim of privilege by the laboring men.

Mr. FREAR. How do you mean claim of privileges?

Col. STEARNS. A claim of unfair competition. For instance, the laboring man who is getting \$5 a day in another camp sees this man working, doing the same work he is doing for \$30 a month, and it is apparent that he would be thrown out of his job if his employer could get such cheap labor.

Mr. FREAR. You mean the patriotism of the man who was getting \$5 a day was disturbed if the soldier was working at \$1 a day? Was that the thought you spoke of?

Col. STEARNS. No, I would not put it that way.

Mr. FREAR. You were trying to give the mental operation of the man who is working. I do not think the committee cares about that. We do not care about the mental operation of the man as to the fixing of the rate. Who influenced you to determine the rate?

Col. STEARNS. As far as I know, nobody influenced us. It was a question as to what we could do to furnish labor. It was quite obvious to the General—I did not have anything to do with the fixing of it—but it was quite obvious to him and, I am quite sure, to practically all the men who considered the question, that to put soldiers into a camp owned by a private operator, if that man could get out his production paying a man \$30 a month instead of \$5 or \$6 a day he would make an awful lot of money at the expense of the Government.

Mr. FREAR. But could not that be adjusted by the contract with the Government, determining what the workman's compensation should be?

Col. STEARNS. We were not making contracts with the loggers.

Mr. FREAR. You were making cost-plus contracts.

Col. STEARNS. No; we were not making cost-plus contracts at that time.

Mr. FREAR. If you were making a cost-plus contract, why would not that be a complete answer that you determined the cost of labor by what was paid by the Government and that that could be reached in that way, and the cost-plus contract could be based upon that.

Col. STEARNS. No, sir; this arrangement was made before there was any idea of cost-plus contracts. It was made to help out the industry—to get men into the industry here in order to get out this airplane lumber.

Mr. FREAR. Did you or the General—you were with him all the time—employ soldiers at soldier pay at any time?

Col. STEARNS. What do you mean "we"—the plus contractors, or do you mean the Government?

Mr. FREAR. I mean you were employing these men. Tell the committee whether you employed the men at any time at a dollar a day

for soldiers, before you gave them the same wages that were given to civilians. You understand that, do you not?

Col. STEARNS. Yes, sir.

Mr. FREAR. The Government was paying soldier wages to the men when they came out here.

Col. STEARNS. Our method was this: When they went to the private operator he paid them the difference between the going wage for the job they were on and the soldier pay.

Mr. FREAR. I understand, but now I am going back before that: I am asking you before that; did you employ these soldiers who were sent out to you at the rate of a dollar a day or did you have any employers employing them at the regular soldier's wages, or did you at this time determine that the soldiers should have the civilian pay: at any time did they work on soldier's wages, soldier's pay, in the private camps or elsewhere?

Col. STEARNS. Where a man was green and was not capable of earning his money we issued instructions to his officers that he was to be put on soldier pay until such time as he was capable of earning more.

Mr. FREAR. And then what?

Col. STEARNS. And then he was to be put on—he given the going wage for the job that job that he was doing.

Mr. FREAR. The same as civilians?

Col. STEARNS. The same as civilians, the same as our bulletin. Mr. Frear.

Mr. FREAR. The same as men in the same relative occupation?

Col. STEARNS. Yes, sir.

Mr. FREAR. Then the officers were the ones who determined what the soldier should get?

Col. STEARNS. Yes, sir.

Mr. FREAR. In other words, Congress determined what the soldier should get—

Col. STEARNS. Yes, sir.

Mr. FREAR. But the officers were to determine when the man's efficiency was such that he would be entitled to that. Congress determined upon the man's pay irrespective of their efficiency, at a certain fixed rate, when they made their appropriation, and you officers took it upon yourselves—

Col. STEARNS. Yes, sir.

Mr. FREAR. By what authority?

Col. STEARNS. We issued the orders from our office.

Mr. FREAR. "We." Who is "we"?

Col. STEARNS. I.

Mr. FREAR. Oh, you issued the order?

Col. STEARNS. I say "we"; I mean my department.

Mr. FREAR. Go on.

Col. STEARNS. That, of course, being approved by the commanding officer. To this effect, where a man was sent to a camp who was absolutely green, knew nothing about bucking or sawing, he was not worth his salt as far as getting out—doing what he was expected to do.

Mr. FREAR. Conceded.

Col. STEARNS. And when he arrived at that, at what the officer in command of his operation considered a fair state of efficiency, some-

thing equivalent to what the other men were doing, then he was immediately to be put on the pay roll at what his companions were getting for similar work.

Mr. FREAR. Then, in other words, you issued an order that was carried out by your subordinates, and the various departments of the Spruce Production Co., whereby a man's efficiency was to be determined by his superior officers.

Col. STEARNS. Yes, sir.

Mr. FREAR. Congress, when they enlisted a soldier, sent him in at \$30 per month, and when he went out as a private he went out at \$30 a month, but your organization under your orders proceeded to determine his efficiency and his pay; that is right, is it?

Col. STEARNS. Yes; but not on our own hook. We had approval for all of this. I say, "all this"; we have approval for paying soldiers, paying civilian wages.

Mr. FREAR. Yes.

Col. STEARNS. I mean to say that we are not trying to revolutionize the Army on our own hook at all.

Mr. FREAR. What approval did you have?

Col. STEARNS. When Gen. Disque made this request he went to Mr. Baker.

Mr. FREAR. You mean Secretary Baker?

Col. STEARNS. Secretary Baker. It was something that had never been done before, and the matter was taken up with Mr. Post, the Assistant Secretary of Labor. Mr. Post approved of the project, and made such approval to the Secretary of War. The Secretary of War then made his approval of the project and it was on that approval that we acted.

Mr. FREAR. Did the Secretary of War, or Mr. Post, or anyone else give your department authority to determine the efficiency of these respective men?

Col. STEARNS. No, sir.

Mr. FREAR. So you took that authority upon your own selves?

Col. STEARNS. Took that on our own authority.

Mr. FREAR. In other words, at a time—let us see if we understand this—when was this, what time?

Col. STEARNS. Well, the authority was gained by the colonel on his trip to Washington just before coming out permanently, in November.

Mr. FREAR. But, of course, you had no men here at that time?

Col. STEARNS. No, sir.

Mr. FREAR. And your force had grown up to what size in the month of August, would you say, 1918?

Col. STEARNS. In the month of August, 1918, we were pretty close to our—(referring to paper). In the last of May we had 12,000 men, and the 1st of November we had 28,000. Now, you can see that there was a gradual increase in that time.

Mr. FREAR. Yes; from one number to the other?

Col. STEARNS. Yes, sir.

Mr. FREAR. That 28,000, does that include officers?

Col. STEARNS. No, sir.

Mr. FREAR. How many officers did you have?

Col. STEARNS. Approximately a thousand.

Mr. FREAR. Approximately 1,000 officers?

Col. STEARNS. I can give you the exact information.

Mr. FREAR. Have you it there?

Col. STEARNS. Not here; no.

Mr. FREAR. That is close enough. In the month of August the American troops were engaged in pretty active fighting, in France, were they not?

Col. STEARNS. Yes, sir.

Mr. FREAR. There were no exemptions from service with those men, were there?

Col. STEARNS. No, sir.

Mr. FREAR. There was no one over there to determine the efficiency of those men for what they were being paid?

Col. STEARNS. No, sir.

Mr. FREAR. They were there upon the pay given by Congress!

Col. STEARNS. Yes, sir.

Mr. FREAR. And they were losing their lives quite rapidly in August?

Col. STEARNS. Yes, sir.

Mr. FREAR. And you, out here in Portland, acting without authority of Congress or any public official, determined the efficiency, through your subordinates, and the amount of money that they should receive at that time, and they were exempt from actual military service. is that right?

Col. STEARNS. In some cases that is so, from necessity.

Mr. FREAR. I am asking that you answer that question yes or no: that is an easy question?

Col. STEARNS. No, sir; I can not answer it that way.

Mr. FREAR. Let me ask you this: Who else can you name that determined the amount of pay to be fixed for those men? I understood you to say that you were the officer.

Col. STEARNS. We fixed it.

Mr. FREAR. Not "we," you; that you were the officer who determined, through your subordinate officers, what their efficiency merited, and how much they should be paid; that is right, is it?

Col. STEARNS. Not exactly, no.

Mr. FREAR. What is the distinction?

Col. STEARNS. Only those men who were not capable came under that class at all. If the logging camp foreman considered a man not absolutely ignorant the case was brought to the attention of his commanding officer, and he was not paid full pay until he became efficient, but that was a very small number of men.

Mr. FREAR. That is just the same situation, except brought up from the other end. I say, you were the man who was in authority: you were the commanding officer; that is right?

Col. STEARNS. Yes.

Mr. FREAR. And the men who determined the efficiency were the officers under you; that is right?

Col. STEARNS. Yes, sir.

Mr. FREAR. It was not the foreman of the logging camp or anybody else?

Col. STEARNS. Oh, no.

Mr. FREAR. They did it. Now, at that time did you have the cost-plus contract?

Col. STEARNS. What do you mean by that time, Mr. Frear?

Mr. FREAR. August?

Col. STEARNS. Yes, sir.

Mr. FREAR. 1918?

Col. STEARNS. Yes, sir.

Mr. FREAR. You were working in August under cost-plus contract?

Col. STEARNS. Yes.

Mr. FREAR. So that the contractor received not only the 3 per cent, if his contract called for 7 per cent, on the earnings of the civilian labor, but upon the earnings of the soldier whose pay you had fixed?

Col. STEARNS. Yes, sir. I would like to make one statement after that.

Mr. FREAR. Yes, Colonel; you may do that at any time, if you will just ask.

Col. STEARNS. That, possibly, was the most unpleasant duty that our office had to perform, and was done purely from necessity, and not because we felt the men were any more entitled to it.

Mr. FREAR. That is, you assumed that there was a necessity?

Col. STEARNS. Yes, sir.

Mr. FREAR. There was no evidence that a necessity had arisen, so far as anything had occurred to stop the production of spruce; the I. W. W. troubles were serious up to what time, October, 1917?

Col. STEARNS. After that; until the Loyal Legion was formed and well under operation.

Mr. FREAR. What was the evidences of disturbances from October until November, when Disque came here from I. W. W. causes; were not all the loggers working then?

Col. STEARNS. Oh, no.

Mr. FREAR. They were not working?

Col. STEARNS. Lots of them were not. I can not give you the exact figures.

Mr. FREAR. I do not want them. This is just for information.

Col. STEARNS. When we came here, Mr. Frear, we could not talk with any logger or lumberman for five minutes before he got off on the I. W. W. situation, and it was pretty hard to talk business from that time on. He was simply eaten up with it; it was so hindering his work.

Mr. FREAR. Do you remember that a request was made from the Secretary of War to furnish a military force out here, I think three regiments, and that that was refused by the Secretary of War, or was that before your connection with the service?

Col. STEARNS. Do you mean that request was made on us?

Mr. FREAR. No, upon the Secretary of War for three regiments, or two or three regiments of soldiers; that testimony has been before this committee. It was for the purpose of aiding in the spruce production, controlling conditions?

Col. STEARNS. I do not quite get your question. Will you ask that again? (Question repeated.) I do not remember that.

Mr. FREAR. Possibly that was before you came here?

Col. STEARNS. Probably.

Mr. FREAR. Were any troops used for the purpose of preserving order here in the camps, so far as you know?

Col. STEARNS. There were none sent primarily for that purpose. Whether they indirectly did so I am not in a position to state.

Mr. FREAR. They were sent out in the camps for the purpose of working, just the same as the day laborers?

Col. STEARNS. Yes.

Mr. FREAR. They were not used for military purposes?

Col. STEARNS. Not directly, Mr. Frear, but their presence had a very desirable effect.

Mr. FREAR. I do not think that is a violent assumption. Necessarily, the scope of the investigation here will have to be limited, because it will be taken up in Portland along with some other matters that will come more properly before the committee there, but I desire to ask you at this time in regard to the contracts made with Siems-Carey, Kerbaugh & Co. You are familiar with those contracts?

Col. STEARNS. I have them here; I am not very familiar with the details of them myself.

Mr. FREAR. Come to think about it, that is right; they were entered into before you were here?

Col. STEARNS. I was here, but it just so happened that I was not present when they were being discussed, except indirectly. I know the main facts, some of the main facts, about them.

Mr. FREAR. You have copies of the contracts?

Col. STEARNS. I have copies. Would you like to see them?

Mr. FREAR. Yes; please. (Witness produces contracts.) How many contracts were made by your organization with the Siems-Carey, Kerbaugh Co., how many different contracts, as nearly as you remember?

Col. STEARNS. Two are all that I am familiar with, sir.

Mr. FREAR. There were supplemental contracts, were there not? I am not sure; I am just asking.

Col. STEARNS. I am not sure, but I believe not.

Mr. FREAR. I knew there were with the Warren Spruce Co., but I am not sure as to this. The Spruce Production Corporation was how financed?

Col. STEARNS. The corporation or the division, Mr. Frear?

Mr. FREAR. Let us take the division first, the division before the corporation was formed?

Col. STEARNS. By appropriation or by allotment from the aircraft appropriation.

Mr. FREAR. Made by whom, the Chief Signal Officer?

Col. STEARNS. Yes, sir.

Mr. FREAR. That money was sent here for carrying on the activities of spruce-production work here?

Col. STEARNS. Called for as needed.

Mr. FREAR. Do you know approximately how much, before the corporation took over the same work?

Col. STEARNS (referring to paper). I can give you the exact figures, \$27,497,240.12.

Mr. FREAR. That was the amount that was expended or for which commitments were made?

Col. STEARNS. Expenditures, these were expenditures prior to the origination of the corporation.

Mr. FREAR. Or the taking over of affairs by the corporation?

Col. STEARNS. Yes, sir.

Mr. FREAR. Now, the Spruce Corporation was organized under that special authority given by Congress?

Col. STEARNS. Yes, sir.

Mr. FREAR. How many members composed your directorate?

Col. STEARNS. Seven.

Mr. FREAR. What was the capital stock?

Col. STEARNS. One hundred thousand dollars.

Mr. FREAR. You had, under your articles of organization, authority to issue bonds?

Col. STEARNS. Debentures.

Mr. FREAR. And you did issue them?

Col. STEARNS. No, sir.

Mr. FREAR. How did you finance your organization, your corporation?

Col. STEARNS. The allies had a good deal of dealings with the Bureau of Aircraft Production. They apparently desired to continue the dealings with them rather than open up new arrangements with another concern. So instead of delivering those debentures we turned them over to the Bureau of Aircraft Production and they made all of the collections directly with the allies instead of our making them directly with the allies, thus simplifying the two.

Mr. FREAR. The Bureau of Aircraft Production. Who do you mean by that, what official for instance?

Col. STEARNS. Well, it is the Air Service now, Mr. Frear. It was the old Bureau of Aircraft Production.

Mr. FREAR. That is, Mr. Ryan?

Col. STEARNS. Yes, sir.

Mr. FREAR. He was a director?

Col. STEARNS. Yes, sir.

Mr. FREAR. Do you know, of your own knowledge, or from the records, whether or not any money was received from the allies?

Col. STEARNS. I know that—

Mr. FREAR. From the sale of those bonds?

Col. STEARNS. In round numbers, approximately \$14,000,000 has already been collected from the English for their share of our airplane lumber produced.

Mr. FREAR. They have paid that money?

Col. STEARNS. They have paid that money.

Mr. FREAR. Who has received it?

Col. STEARNS. The Air Service in Washington.

Mr. FREAR. Out of what money—was that a sale of bonds?

Col. STEARNS. No, sir.

Mr. FREAR. Out of what?

Col. STEARNS. It was a collection from the sale of our lumber to the Allies, to the British.

Mr. FREAR. I understand; but my question is, You issued the debenture bonds?

Col. STEARNS. Yes, sir.

Mr. FREAR. Your corporation?

Col. STEARNS. And they were taken by our Government, by our Air Service, instead of by the Allies, in order to simplify the collection of the two debts. The amount of these bonds was collected from the Allies.

Mr. FREAR. That is, you assume that that was done; it may have been done, but your money came from the Air Service at Washington, is that right, or from an appropriation by Congress, or how? Let me put the question in a different form: How many bonds did you issue?

Col. STEARNS. \$25,000,000 worth.

Mr. FREAR. You issued \$25,000,000 worth? From whom did you get the money to pay for them?

Col. STEARNS. We got it through the Air Service, from the Allies.

Mr. FREAR. Did the Allies have any signature; did they send word to you?

Col. STEARNS. We held letters from the Air Service showing the collections they had made for our account.

Mr. FREAR. I am asking you from whom you got it.

Col. STEARNS. That we got the money?

Mr. FREAR. Yes.

Col. STEARNS. From the Air Service.

Mr. FREAR. You got it from the Air Service; from what official?

Col. STEARNS. Why, it was just a physical transaction. I can not give the name.

Mr. FREAR. I do not mean the name. I mean the official that would have to do with that work?

Col. STEARNS. Why, the head of the Finance Division.

Mr. FREAR. The head of the Finance Division of the Air Service, then, took the debenture bonds—how many?

Col. STEARNS. Twenty-five million dollars' worth.

Mr. FREAR. He sent to your department, did he, \$25,000,000?

Col. STEARNS. No, sir.

Mr. FREAR. How much?

Col. STEARNS. He sent us what he collects from the—no, he credits our account with what he collects from the sales.

Mr. FREAR. How much did he send you? I am not getting back to your suggestion about the allies all the time. Tell me what he sent you, how much?

Col. STEARNS. What we called for, what we needed.

Mr. FREAR. How much did you call for?

Col. STEARNS. Well, we called for \$10,000,000, I believe, before the signing of the armistice.

Mr. FREAR. What did you call for in all?

Col. STEARNS. You mean the total expenditures of our organization?

Mr. FREAR. The total sale of debenture bonds. I am talking about the sale of debenture bonds.

Col. STEARNS. How much we got from those bonds?

Mr. FREAR. Yes; how much you got from those bonds.

Col. STEARNS. I think of those particular bonds, I believe we only called for \$10,000,000, but I am not positive of that, and would suggest that the comptroller give you the actual figures.

Mr. FREAR. I have a memorandum here—I wonder if it has been issued by your organization—that the sale of debenture bonds was \$21,500,000.

Col. STEARNS. Yes.

Mr. FREAR. Would that be correct?

Col. STEARNS. Yes; that is right, instead of the 25,000. The original discussion was 25,000, and then changed to that.

Mr. LEA. You mean 25,000,000?

Mr. FREAR. Yes, you mean 25,000,000?

Col. STEARNS. Twenty-five millions.

Mr. FREAR. \$21,500,000 was paid by the Air Service in Washington?

Col. STEARNS. Our account was credited with that. Whether we actually received that money—I am quite sure we did not receive it all, because we were calling for that money as we needed it.

Mr. FREAR. How much did you receive?

Col. STEARNS. As I tell you, I would prefer that you ask the comptroller that, but my recollection is that it was approximately \$10,000,000 of that \$21,000,000, was actually sent out to the coast.

Mr. FREAR. Didn't you deposit at one time over \$20,000,000 in one bank from the sale of debenture bonds?

Col. STEARNS. In one bank?

Mr. FREAR. Yes.

Col. STEARNS. I have no recollection of that.

Mr. FREAR. You don't know about that?

Col. STEARNS. No, sir.

Mr. FREAR. Now, the capital stock, you say, was \$100,000. Who were the stockholders?

Col. STEARNS. It has changed from time to time.

Mr. FREAR. I do not mean the individuals; how many stockholders did you have?

Col. STEARNS. The United States owned all the stock except what was necessary by law for individual stockholders to hold as qualifying stock, and there were some seven of those stockholders.

Mr. FREAR. And they had how much apiece?

Col. STEARNS. They paid \$1 for that qualifying stock.

Mr. FREAR. And then the \$99,000 and the balance was held by—

Col. STEARNS. Was held by the Government and voted by the Director of Aircraft Production.

Mr. FREAR. Who was the Director of Aircraft Production?

Col. STEARNS. It was first voted by him and then by the Director of Air Service. First, Mr. Ryan was the Director of Aircraft Production, and he voted it while he was in. Then we had the authority delegated — then we had Lieut. — No, Gen. Menoher voted it as Director of Air Service, and then Lieut. Col. Mars was made Director of Aircraft Production, and he cast the last vote on that.

Mr. FREAR. Lieut. Col. —

Col. STEARNS. Mars.

Mr. FREAR. Throughout?

Col. STEARNS. Yes, sir.

Mr. FREAR. Until after the signing of the armistice Mr. Ryan was the director?

Col. STEARNS. That is correct, sir.

Mr. FREAR. So he held the \$99,000 in shares of stock—

Col. STEARNS. Well, he did not hold it, he voted it. I suppose you would call holding it intrust.

Mr. FREAR. The record shows that you received \$21,500,000 from the sale of debenture bonds, does it not? I mean that is your testimony.

Col. STEARNS. Yes, sir; either credited to our account, or—I do not think it was physically received, that is my point was all.

Mr. FREAR. What would be the indebtedness where the credit would appear, in what form? You say you believe it was credited. What would be the indebtedness to offset the credit—what kind of indebtedness?

Col. STEARNS. We would draw from time to time on that account. It was placed to our account in Washington, and we would draw on it from time to time to carry on the expenses of our work.

Mr. FREAR. Then what you did, you drew the \$21,500,000. did you not? I want to get the procedure?

Col. STEARNS. Yes, sir; I guess that was done.

Mr. FREAR. Let me say this, if there was any misstatement in the record, or anything like that that you should ascertain afterward—that you want to correct, we will be very glad to have you do that. We are just asking for the general scope of the work and the way in which it was carried out.

Col. STEARNS. I guess it was drawn, but it has not been used.

Mr. FREAR. What is the balance on hand now, in cash, approximately?

Col. STEARNS. Have you got it right there, Walker? (Refers to memorandum.) Roughly speaking, it is \$10,000,000.

Mr. FREAR. That is the cash that is in the hands of the corporation to-day?

Capt. WALKER. In the banks.

Mr. FREAR. Yes, in the banks; I understand. Here is an item of commercial lumber sales, and I am taking this up briefly because the statement appears before us, of \$579,000. What kind of sales were those, Colonel?

Col. STEARNS. Commercial lumber sales.

Mr. FREAR. I want to get the procedure?

Col. STEARNS. At the cut-up plant, out of the cut-up plant operations. Our main object was to produce airplane lumber. We produced and shipped that airplane lumber and sold it to the allies and to our own Government. There was developed in that operation a large amount of side cuttings, which was stored in the yard and sold to the best advantage, from time to time.

Mr. FREAR. And that is the \$579,000 on commercial lumber?

Col. STEARNS. What are you looking at, please?

Mr. FREAR. The statement here that was made—

Col. STEARNS. Yes, sir.

Mr. FREAR. You mean your cut-up plant down at Vancouver?

Col. STEARNS. Yes, sir.

Mr. FREAR. The next comes aircraft lumber sales, \$5,059,000 in round numbers. What was that?

Col. STEARNS. I want to get all the facts in that. That is the sales of the aircraft lumber since the formation of the corporation—

Mr. FREAR. Yes.

Col. STEARNS (continuing). To the allies.

Mr. FREAR. What were the sales of lumber before the forming of the corporation? I mean airplane stock.

Mr. STEARNS. I will get that for you in a minute, Mr. Frear.

Mr. FREAR. All right.

Mr. STEARNS. Is there anything else you want?

Mr. FREAR. Yes, I would like to know, right following that, the salvage sales, which are—

Mr. STEARNS. That is the sales of equipment?

Mr. FREAR. Those were sales since the formation of the corporation, up to June 30?

Mr. STEARNS. Well, those are the sales on the equipment that we had on hand after the armistice was signed and up to June 30.

Mr. FREAR. That is right; and what were the sales of commercial lumber and of aircraft lumber and of salvage prior to the organization?

Mr. STEARNS. Well, you see there was no—the salvage has all taken place since the armistice was signed.

Mr. FREAR. I assume that; but on the other two, the aircraft lumber sales—

Mr. STEARNS. The sales of that Mr. Walker is now getting the figures for.

Might I correct one statement? I said that \$5,000,000 was the total sales. It is not the total sales; it is the cash received on account of those sales.

Mr. FREAR. Yes.

Mr. STEARNS. Yes.

Mr. FREAR. We are going on the cash statement here, that I am trying to get the facts about, that is all. Have you got the receipts from sales prior to the formation?

Mr. STEARNS. Approximately \$15,000,000. That is up to the latter part of August, and I will have to get you those figures later on.

Mr. FREAR. From all sources.

Mr. STEARNS. You asked me the amount.

Mr. FREAR. Commercial lumber sales.

Mr. STEARNS. No, sir; you asked me the amount of the aircraft lumber sales under the old régime—under the division.

Mr. FREAR. Yes.

Mr. STEARNS. I haven't that part here.

Mr. FREAR. All right. Then we will supply that later.

Attached to the statement of cash receipts and disbursements, sent by your company, is the abstract of expenditures to June 30, 1919. This statement carries the financial affairs of the corporation from the time of its organization down to the 30th of June, 1919. The item of \$4,341,147 for spruce—

Mr. STEARNS. Where is that, Mr. Frear?

Mr. FREAR. About three-fourths of the way down on the first page—no, I mean on the second page—of the Siems-Carey-Kerbaugh Corporation?

Col. STEARNS. I have a corrected figure on that. This was estimated at that time. We have carried or extended our accounts further since that time. You understand, we haven't closed the Siems-Carey account yet.

Mr. FREAR. Yes.

Col. STEARNS. And I have a more correct figure on that. [Examining papers.] Is it the railroad up there that you are specially interested in?

Mr. FREAR. No, this is the spruce contract, I am first speaking about, \$4,341,147, is the item that appears in the cash statement.

Col. STEARNS. I have not the other figures on that, but I can get them, or when you come to Portland we can go into that.

Mr. FREAR. I would rather have that, if we could, while we are here, but you need not give it just now.

Mr. STEARNS. That is an approximation on this date. It is a little changed since then, not a great deal.

Mr. FREAR. This was a statement up to June 30, on your books?

Col. STEARNS. Yes.

Mr. FREAR. That \$4,341,147?

Col. STEARNS. Yes, sir.

Mr. FREAR. That money was paid out under the Siems-Carey-Kerbaugh spruce corporation contract?

Col. STEARNS. Yes.

Mr. FREAR. Were any advances made to this corporation?

Col. STEARNS. Yes, sir; from time to time advances have been made.

Mr. FREAR. On the next page, in relation to the spruce, appears an item of \$750,000, made to the Siems-Carey-Kerbaugh Spruce Corporation on the spruce contract. That is the total advance that was made to them?

Col. STEARNS. Where is this, Mr. Frear?

Mr. FREAR. That is on the top of the next page, the third page; that is it right there.

Col. STEARNS. I guess I haven't your statement.

Mr. FREAR. I guess you have it there.

Col. STEARNS. We will have prepared for you, detailed cost statements, and they should be here tonight, of those Carey—two Siems-Carey contracts. They are being prepared and they should be here tonight.

Mr. FREAR. Don't you have it there?

Col. STEARNS. I don't find what you are referring to.

Mr. FREAR. I think it is right there before you. [Col. Stearns handed paper to Mr. Frear.]

Mr. FREAR. Oh, no, this is a different statement. You will find it under "War credit advancement" on your sheet. \$750,000 was advanced to the Siems-Carey-Kerbaugh Co., for spruce.

Col. STEARNS. Yes sir.

Mr. FREAR. And \$500,000 was advanced to the Siems-Carey-Kerbaugh Corporation for their railroad?

Col. STEARNS. Yes sir.

Mr. FREAR. There was paid to the railroad corporation, according to your statement, \$3,088,511.93, prior to June 30?

Col. STEARNS. Yes sir.

Mr. FREAR. What has been paid since that time, on the railroad contract, and also on the spruce contract?

Col. STEARNS. As I have stated, Mr. Frear, the detail statement will be here tonight, to give you the exact amount. I would rather wait until those exact figures are here.

Mr. FREAR. You haven't the total with you?

Col. STEARNS. No, sir; not on those accounts.

Mr. FREAR. This advancement of \$500,000 and \$750,000, where does that come in this payment that was made, is that to be deducted, or a portion of it to be deducted, or what bearing has that got on these payments that were made to the Siems-Carey-Kerbaugh Co.?

Col. STEARNS. That is the total figure, that is not the coast. These are advances and are to come out of—any advances, of course, would come out of the moneys due the corporation.

Mr. FREAR. But that doesn't quite reach my point. You have advanced for the spruce corporation \$4,341,000?

Col. STEARNS. Yes sir.

Mr. FREAR. You have advance for the Spruce Corporation \$750,000

Col. STEARNS. Yes. We haven't paid it yet.

Mr. FREAR. You haven't paid which?

Col. STEARNS. No, that settlement has not been made with the corporation yet, complete settlement has not been made.

Mr. FREAR. This says expenditures to June 30; this don't say commitments or anything.

Col. STEARNS. No.

Mr. FREAR. That is right, isn't it?

Col. STEARNS. That is correct. I am mistaken, yes. That is not the final figures, however.

Mr. FREAR. The \$500 in addition to the \$3,000,000, making \$3,500,000, that has been paid by the corporation to Siems-Carey-Kerbaugh Co. for the railway, depending upon the final settlement.

Col. STEARNS. How much?

Mr. FREAR. You have advanced the Siems-Carey-Kerbaugh Co. \$500,000, according to this statement?

Col. STEARNS. Yes.

Mr. FREAR. You paid the Siems-Carey Kerbaugh Co. \$3,088,000?

Col. STEARNS. Three million nine hundred thousand.

Mr. FREAR. Three million nine hundred thousand?

Col. STEARNS. Eighty-eight. The total cost of that—

Mr. FREAR. Those are under your disbursements, and my question is: Are they cumulative or are they—

Col. STEARNS. No, sir; they are not. One is a War Credits Board advance and the other is a spruce production advance.

Mr. FREAR. Well, now, how much more has been advanced by the War Credits Board and in the hands of Siems-Carey-Kerbaugh Co. than the 3,988,511 that you people have advanced?

Col. STEARNS. I can't answer that question until I get all my records here, and I would prefer not to attempt to.

Mr. FREAR. Can you tell, when the records are here, what the relation is of the War Credit Boards—

Col. STEARNS. Yes; I can give you the exact information.

Mr. FREAR. When will the records be here, to-night?

Col. STEARNS. They should be here to-night, sir.

Mr. FREAR. The Siems-Carey-Kerbaugh Co.—the contract was entered into on May 12, 1918. How did the company enter into that contract with this firm, if you know?

Col. STEARNS. I don't know the details of how that was done, sir.

Mr. FREAR. This was a cost-plus contract?

Col. STEARNS. Yes, sir.

Mr. FREAR. For the taking out of spruce, from Clallam County, wasn't it practically confined to that county?

Col. STEARNS. Yes, sir.

Mr. FREAR. The contract was for 250,000,000 feet of flitches?

Col. STEARNS. As the contract states. I have not the figures in my mind.

Mr. FREAR. At a cost to the Government of approximately \$25,000,000, if the contract was fulfilled?

Col. STEARNS. I don't know what the final cost would be, Mr. Frear.

Mr. FREAR. Doesn't it so state? I don't know that it does.

Mr. LEA. The contract states. Could not we put the contract in evidence?

Mr. FREAR. I think we will. I think we will put it in. This exhibit marked for identification "B"—this was the final contract with the Siems-Carey-Kerbaugh Co.

Col. STEARNS. Yes, sir.

Mr. FREAR. The only contract that has been entered into, in fact—I mean for spruce?

Col. STEARNS. Yes, sir.

Mr. FREAR. And with the other attached papers, including the contract for advancement and other matters, that is all that you know of that concerns this spruce contract?

Col. STEARNS. Yes, sir.

Mr. FREAR. I will just offer it in evidence, and then I want to inquire.

(Contract referred to was marked "Exhibit B. Stearns, Aug. 20, 1919.")

Col. STEARNS. While you are touching on that matter of cost I would like to make a brief statement—the general figures on the cost of that contract.

Mr. FREAR. Which is that, the railroad contract?

Col. STEARNS. Both of them?

Mr. FREAR. Both of them.

Col. STEARNS. Yes, sir; the matter of profit.

Mr. FREAR. I was going to ask you some questions on it, and I don't know but what it will develop; if not, you can supply it.

Col. STEARNS. What I was going to say, that after the Government—after the contractors—Siems-Carey, contractors, have paid their income tax to the Government—I understand they are in this 80 per cent class—the total profits to them on this railroad contract will be \$51,000 and a little over.

Mr. FREAR. That was due to no fault of the spruce corporation, but due to an act of Congress, was it not?

Col. STEARNS. May I finish this, please, Mr. Frear?

Mr. FREAR. Yes.

Col. STEARNS. And the total profits for them, under the spruce contract, will amount to \$65,000 and a little over, and the total profits that all our cost-plus contractors will get, after they have paid their income taxes, will be probably less than \$250,000.

Mr. FREAR. Do you take any credit to your corporation for that result that you are stating to the committee; if so, in what particular?

Col. STEARNS. I am not taking credit for anything; I am simply stating facts.

Mr. FREAR. You are stating facts, because Congress passed the law that taxed those people upon those contracts. You paid the money, did you not, under the contract?

Col. STEARNS. I am simply stating—

Mr. FREAR. You are simply stating that Congress took the money back, under an act; that is right, isn't it?

Col. STEARNS. That is right.

Mr. FREAR. And it was not any act of your people out here that changed the amount of their profits?

Col. STEARNS. I am simply stating the facts as they developed, that is all.

Mr. FREAR. Yes; we understand. If the war hadn't stopped as it did November 11, could you tell what the profits would have been?

Col. STEARNS. Nobody could tell what the profits would have been.

Mr. FREAR. No, it was that thought that those people undertook to make the contract to carry it out in 18 months after the 1st of December for the deliveries of spruce, isn't it—the 1st of December, 1918, they were not to deliver spruce until December, 1918—isn't that right—under the contract?

Col. STEARNS. If it says so, Mr. Frear.

Mr. FREAR. I think it says so, and that period even hadn't been reached, they hadn't begun delivering spruce. So why do you say at this time that their profits were so small, when the contract hadn't been entered into as far as the delivery of spruce was concerned?

Col. STEARNS. The newspapers having charged an expenditure out here, I think it is but right that the American people should know just the exact amount of profits these people are going to get out of said work.

Mr. FREAR. We desire to aid the American people in ascertaining this, and we want to find out what part the spruce corporation has had in saving all this money. If that company had gone on for the full period of 18 months, as proposed, instead of stopping before the contract took effect, do you say that the profits would only have been that amount, unless Congress had intervened?

Col. STEARNS. I make no statement concerning profits in the future; I am stating the situation as it exists today.

Mr. FREAR. Due to the action of Congress, subsequent to the making of the contracts; that is right, is it not?

Col. STEARNS. Oh, yes; yes, Congress passed the law.

Mr. FREAR. I am trying to find what relation your statement has to the facts before us. If Siems-Carey-Kerbaugh Co. wishes to make a statement that their profits are small, and apparently that would be—

Mr. LEA. Do you object to the facts being given in the record, upon such a material matter as this?

Mr. FREAR. In answer to Mr. Lea, a member of the committee, I will say this: That here is a contract made for \$25,000,000—a 7 per cent plus contract, possibly running to 15 per cent, which was the limitation placed upon it; that the war stopped before this contract could take effect; that Congress also passed an act which provided that the revenues should take effect upon the profits of men who were doing business in commercial life, and that the entire result was not effected in the slightest degree by the action of the Spruce Corporation, but by the act of Congress, in enforcing the revenue law, and by the fact that the war stopped a few months after the contract was entered into—the profits would have been larger if the contract had been carried out, wouldn't they; is that right?

Col. STEARNS. What profits?

Mr. FREAR. The profit they would make under this contract, 7 to 15 per cent on a \$25,000,000 contract; wouldn't they have gone to these people if they had performed the contract?

Col. STEARNS. Except that which would be charged—which would have to be returned to the Government, by income tax.

Mr. FREAR. And that is an act Congress has passed, but they would get that money from your corporation, wouldn't they, you had nothing to do with the collection of the tax?

Col. STEARNS. Mr. Frear, we are acting as a governmental agency, we are a part and parcel of the Government; we were not a separate entity.

Mr. FREAR. Have you any part whatever in the collection of the income tax, or the passing of the law?

Col. STEARNS. We act in cognizance of all the laws that have been passed. We have a right to consider such laws when we make any particular policies.

Mr. FREAR. Did your organization, when they entered into this contract, know about what the effect would be of the income tax?

Col. STEARNS. I don't know, because I didn't make this contract; but we would have a right to assume that they did until the contrary is proved.

Mr. FREAR. You think that. Then you mean to say that instead of the 7 per cent plus contract that was entered into here in this contract, your people took into consideration the fact that Congress might take away their profits?

Col. STEARNS. I don't know, Mr. Frear.

Mr. FREAR. You don't know anything about that, do you? Naturally you would not. It don't concern your corporation what Congress does or what income tax is collected, does it, you haven't any interest in that at all?

Col. STEARNS. It certainly does.

Mr. FREAR. Any more than a commercial body might, have you?

Col. STEARNS. We have. We act as a governmental agency.

Mr. FREAR. Tell me any single instance, while your corporation has been in existence, of a contract that you framed in consideration of the income tax.

Col. STEARNS. I didn't frame the contract.

Mr. FREAR. And then you are assuming that those contracts were framed that way?

Col. STEARNS. I don't know. But we have a right to assume that we know what is common knowledge.

Mr. FREAR. You have no right to assume that with any commercial body doing business in the same way, have you?

Col. STEARNS. We were a governmental agency.

Mr. FREAR. It makes no difference whether you were a governmental agency, so far as the profit is concerned. Any man who was making profits was subject to this tax, was he not?

Col. STEARNS. We were not making profits. We were acting as a governmental agency, in protecting the Government, and we have a right to use that Government's laws.

Mr. FREAR. How did you protect the Government in the internal-revenue tax? Just give us an illustration; give the committee an illustration.

Col. STEARNS. I took no part in that.

Mr. FREAR. No. Well, how did you? How did you do it, directly or indirectly—make that explanation to the committee.

Col. STEARNS. I have no explanation to make, because I had no part in making those contracts, Mr. Frear. I merely make that assumption, that the people who made those contracts had a right to use what was common knowledge concerning—

Mr. FREAR. That they had a right to use that, and that was an assumption on your part, that they did use it?

Col. STEARNS. Yes.

Mr. FREAR. You know nothing more about it, no more than any member of the committee?

Col. STEARNS. Purely an assumption of general knowledge.

Mr. FREAR. The war ended before this went into effect.

Col. STEARNS. I have another statement, Mr. Frear, about the cost, that I would like to have put in the record.

Mr. FREAR. If it is no more relevant than that, the committee will take up the matter in the proper way, I think at this time, because the last remark does not seem to me so relevant, so far as your organization is concerned. The committee can weigh that fact—what the profits will be.

Col. STEARNS. It is not a matter of profits, it is a matter of information concerning expenditures that I think you should know.

Mr. FREAR. Expenditures in what?

Col. STEARNS. Expenditures of the corporation and the division.

Mr. FREAR. You don't claim that any of these statements you have given the committee are not accurate, do you?

Col. STEARNS. No.

Mr. FREAR. Those are true. In other words, this railroad—what is the length of the railroad out there?

Col. STEARNS (producing memorandum). All of that matter is of general information here, Mr. Frear.

Mr. FREAR. I am just asking you to give me the figures. Three million nine hundred and eighty-eight thousand five hundred and eleven dollars, with some additions. Those figures are right, are they?

Col. STEARNS. They are right at that date, yes.

Mr. FREAR. What approximately has been the addition, \$100,000?

Col. STEARNS. I would rather not make any approximation.

Mr. FREAR. Twelve thousand dollars will bring it up to \$4,000,000.

Col. STEARNS. Less than \$4,000,000.

Mr. FREAR. And less than \$12,000 incurred since June 30, 1919.

Col. STEARNS. The cost of the road will be less than \$4,000,000, I am quite positive. I can give you the exact figures this evening or as soon as possible.

Mr. FREAR. The amount that you have stated here, the \$3,988,511, is that it?

Col. STEARNS. Yes.

Mr. FREAR. That has been expended for the railroad?

Col. STEARNS. Yes.

Mr. FREAR. How many miles of railroad?

Col. STEARNS. Thirty-six miles.

Mr. FREAR. That is, that would be about \$110,000 a mile?

Col STEARNS. I think it would probably be a little bit more than that. It may run to \$111,000 or \$112,000 a mile.

Mr. FREAR. Does that include the cost of rails?

Col. STEARNS. It includes the complete costs; yes.

Mr. FREAR. Does it include the operating machinery—that is, I mean equipment, locomotives, cars, etc.?

Col. STEARNS. No, sir; that is road cost.

Mr. FREAR. There are no expense of terminals?

Col. STEARNS. No, sir.

Mr. FREAR. In fact, you have no terminals excepting that little one at the lake?

Col. STEARNS. The little one at Lake Pleasant.

Mr. FREAR. I was thinking of the one at Disque Junction. That road runs from Disque Junction to Lake Crescent and then down to Lake Pleasant?

Col. STEARNS. Yes.

Mr. FREAR. Do you know anything about the comparative cost of logging roads? Have you ever had any experience in that?

Col. STEARNS. I have had no experience in building logging roads.

Mr. FREAR. Do you know the valuations of transcontinental lines per mile, counting equipment terminals and all?

Col. STEARNS. Only a general information.

Mr. FREAR. What information have you as to the value, for instance, of either the Milwaukee or the Northern Pacific, or the Southern Pacific—as to the valuation per mile?

Col. STEARNS. I object to that question, because that is something I had nothing to do with. I had nothing to do with the engineering end of this thing, and I object to having my knowledge or lack of knowledge on engineering brought out, sir.

Mr. FREAR. Your objection is noted. Now you are the commanding officer, the president of this corporation with these millions of dollars in your hands. Can you tell this committee anything about the comparative cost of other transcontinental lines per mile—do you know anything about them?

Col. STEARNS. Yes, I know.

Mr. FREAR. What do you know?

Col. STEARNS. General information.

Mr. FREAR. That is all we want.

Col. STEARNS. That railroads may run from \$50,000 to \$100,000 a mile, depending on the conditions of labor and material used.

Mr. FREAR. What transcontinental lines can you name that runs anything like those figures?

Col. STEARNS. I have never made any particular study of transcontinental lines.

Mr. FREAR. You do not know, is that it?

Col. STEARNS. Exactly so.

Mr. FREAR. That is all, then, on that subject.

Col. STEARNS. Not the kind of a road we had to have in the time we had to have it and at the time we had to have it.

Mr. FREAR. I see.

Col. STEARNS. I have made a request, Mr. Frear, and I would like to have it acted upon either one way or the other, to make a definite statement of costs that I consider of importance to the committee.

Mr. FREAR. In regard to this road?

Col. STEARNS. Not in regard to this particular road; no, sir.

Mr. FREAR. When we get to it we will take up any question you have on any cost, we will be glad to. Do you know anything about railroad constructing yourself?

Col. STEARNS. No, sir.

Mr. FREAR. You are not an engineer?

Col. STEARNS. I am not an engineer.

Mr. FREAR. Do you know anything about the timber business? Are you a logger?

Col. STEARNS. No, sir. I am a soldier. You have my history.

Mr. FREAR. Now, referring to the spruce contract. This spruce contract was dated May 12, 1918, for 250,000,000 feet of flitches, which Siems-Carey-Kerbaugh Co. agreed to deliver within 18 months from the 1st day of December, 1918. This is just to make a brief record, so the contract will be understood. The price of the spruce flitches was \$100 per thousand, board measure, for No. 1 grade, \$60 per thousand for No. 2 grade. The payments were to be made within 10 days after notification, as appears from the contract.

Under article 16 it says:

If, in the opinion of the Secretary of War, the public interest so requiring, this contract may be canceled by 30 days' notice in writing from the contracting officer to the seller.

And thereupon, of course, there is a settlement to be agreed upon between the contractor and the one with whom the agreement was made. This was a cost-plus contract of 7 per cent, as appears under article 16. That 7 per cent applied on practically everything, did it not?

Col. STEARNS. No, sir. There were a good many things it did not apply on. We tried where we could—I mean the corporation—to make a saving through our ability to buy perhaps at a more reasonable price, and we did so. That was the general rule on all our cost-plus contracts, and where we made a purchase there was no percentage allowed, and no percentage was allowed on commissaries and boarding houses. On practically all other expenditures the percentage was allowed.

Mr. FREAR. What proportion of material did you furnish to those people under the spruce contract?

Col. STEARNS. I can not answer that now.

Mr. FREAR. A very large proportion?

Col. STEARNS. Not a great deal, I do not think. But I can give you that later.

Mr. FREAR. You say that the corporation would occasionally buy material and turn it over to this spruce corporation?

Col. STEARNS. That was our policy with all contractors. In this particular case I will have to get the data for you.

Mr. FREAR. If any purchase was made by this Siems-Carey-Kerbaugh Corporation for carrying out these spruce contracts, either for buying an Army truck or for a dish pan, or whatever it might be, the 7 per cent cost plus was figured on that, was it not?

Col. STEARNS. When it was made by the corporation?

Mr. FREAR. When it was made by the corporation.

Col. STEARNS. We furnished those trucks from our supplies.

Mr. FREAR. Yes, I assumed that you did. In case of a right of way their men were receiving certain payments, certain monthly pay-

ments or bimonthly payments, I assume, weren't they, under the contract?

Col. STEARNS. I do not believe the contract covers that.

Mr. FREAR. The contract provides for it.

Col. STEARNS. They were paid every month I think; in some instances twice a month.

Mr. FREAR. On those payments the Siems-Carey-Kerbaugh Co. got 7 per cent of the amount paid to the employees?

Col. STEARNS. Yes.

Mr. FREAR. If a soldier was employed they received 7 per cent cost plus on the amount paid the soldier?

Col. STEARNS. Just the same amount as if they had hired civilians.

Mr. FREAR. In the case of rights of way, if they bought the right of way would the cost plus apply there? Say they paid to the individual who sold a right of way a thousand dollars for that right of way, then the cost plus would apply, would it?

Col. STEARNS. Yes.

Mr. FREAR. How much was that for the right of way, do you remember, for the railroad?

Col. STEARNS. I could get that figure for you later.

Mr. FREAR. Let me suggest this: That I believe that the cost plus contract applies in this case to the spruce contract only in case of a settlement. That is the understanding, is it, Mr. Lea?

Mr. LEA. Yes.

Mr. FREAR. And under article 17 it is provided that the amount over such excess shall not exceed 15 per cent profit. That was the limitation fixed in that. You are not familiar with the terms of the contract, are you?

Col. STEARNS. Only casually.

Mr. FREAR. That is what appears under article 17.

Mr. LEA. That was on the basis of a completed contract.

Mr. FREAR. The completed contract. The three deliveries made before the time fixed in the contract as a premium or bonus for early delivery. This contract was signed by the Seims-Carey-Kerbaugh Corporation by Mr. Seims, president, and Mr. Kerbaugh, vice president, and by this young officer, Capt. Crisp, on the part of the Government, and approved May 28, 1918, by the Director of Aircraft Production, John B. Ryan. That is right, is it not?

Col. STEARNS. If it appears there it is right.

Mr. FREAR. It will be unnecessary to go into the details of the contract beyond what was suggested, because the contract will be a matter of record.

A contract was entered into about the same time by the above corporation with the Seims-Carey-Kerbaugh Co. for building a railway?

Col. STEARNS. Yes.

Mr. FREAR. This contract gives the date of June 20, 1918. It says in article 1:

This agreement is supplementary to the contract made between the parties hereto approved May 28, 1918, by the Hon. John B. Ryan, Director of Aircraft Production, together with modifications and amendments, etc.

That relates to the spruce contract, does it not; that other contract that we have just been discussing?

Col. STEARNS. I think it does, Mr. Frear: I am not positive.
Mr. LEA. Yes, it does.

In the interest of both parties hereto (that is, the Government on one side and the Siems-Carey-Kerbaugh Corporation on the other), and in order to expedite the delivery of said supplies, the Government shall make an advance payment to the contractor, under the principal agreement, to an amount not exceeding the sum of \$6,000,000, on the terms and securities hereinafter mentioned, and shall make payment by checks directly to the contractor.

And then follows a provision whereby these payments are to be made in advance payments. Were those payments made, or do you know?

Col. STEARNS. To what extent?

Mr. FREAR. That is what we want to find out, to what extent were advance payments made.

Col. STEARNS. Quite considerably. Those figures will be here tonight or later, showing exactly what advance payments had been made.

Mr. FREAR. This was a cost-plus contract at 7 per cent?

Col. STEARNS. Yes.

Mr. FREAR. And getting back to the subject of the right of way, I will ask you for an illustration of the workings of the cost-plus contract, to see if I have a correct understanding. The Siems-Carey-Kerbaugh Co. would send out their men to make arrangements. After, as I understand, the corporation had gotten some understanding what the terms were to be—that is, the corporation negotiated the terms, as I understand it, for the right of way, did they not?

The \$6,000,000 advance was to apply on the spruce contract, which was the principal contract, and the \$750,000 that was advanced on the spruce contract, which presumably was done according to that settlement.

Getting back to the right of way, the individual employed by Siems-Carey-Kerbaugh Co. went out and negotiated for the right of way; he was paid 7 per cent upon his expenses, and his time is paid, that was to be had by the Government. That was one item, was it not?

Col. STEARNS. I am not prepared to answer that. In making up our contract for railroads we secured the right of way ourselves.

Mr. FREAR. I am speaking about the Siems-Carey contract.

Col. STEARNS. I am not prepared to answer that.

Mr. FREAR. That shows in the neighborhood of \$99,000 was paid for the right of way on this contract—I mean from your book. It will then be assumed that that was a 7 per cent basis; that the cost-plus contract at 7 per cent applied on the \$99,000, wouldn't it?

Col. STEARNS. No; it could not be so assumed unless it was actually the cost. As I stated a minute ago, in making up our cost-plus contract we secured the right of way ourselves. I mean, we sent a man down from our office to do it. But these things got very crowded toward the end, and whether we did that or the Siems-Carey, I am not prepared to state, because I had nothing to do with it.

Mr. FREAR. I was about to ask, in the name of the Siems-Carey-Kerbaugh Corporation, if you in any case bought the land for the right of way and then turned over to them the rights.

Col. STEARNS. I am not prepared to answer that.

Mr. FREAR. If you did not, and it appears that \$99,000 was paid, it is assumed, is it not—and I want to get the facts, that is all, if that is

the case—it is assumed that the Siems-Carey-Kerbaugh Corporation paid that money out and were entitled to the 7 per cent-plus contract.

Col. STEARNS. Not if our men did it.

Mr. LEA. I think the fact is that the Siems-Carey-Kerbaugh Corporation people did negotiate for the right of way and were paid a percentage. So, if that is the fact, there is no use wasting any further time on it. I understand that is the fact.

Mr. FREAR. You assume that that is the fact from the facts stated. Now, here is the situation that arises: First, the Government paid the man who was employed to go out and take the right of way; and then after he had succeeded, acting for the Government practically, and bought this, then the Government turns around and pays him on a cost-plus basis for the amount of money that he pays out on the right of way.

Col. STEARNS. I am not familiar with that. I can not answer either of those questions. There are men in our organization that would give the exact information. I think Maj. Sawyer could.

Mr. FREAR. All right, we will call Maj. Sawyer later if necessary. This contract for the building of the railway states in one of these "Whereases" that it is estimated that the total cost of construction of said railway, exclusive of rolling stock, will amount to approximately \$2,500,000. That is to be a standard-gauge railway from a point of the line of the Chicago, Milwaukee & St. Paul Railroad in the State of Washington, to be determined by agreement between the parties, to the contractor's mill site, to be constructed at or near Lake Pleasant in said State. This is provided that the parties themselves should agree upon the line that the road was to follow. That was agreed to all the time, or do you know?

Col. STEARNS. Whether they agreed on that?

Mr. FREAR. Yes.

Col. STEARNS. I do know they did agree on the way that line was to run.

Mr. FREAR. The contract itself does not give the line. It simply gives the two terminal points.

Col. STEARNS. Yes.

Mr. FREAR. One was the connection with the St. Paul Railroad and the next was Lake Pleasant. So that was to be determined without relation to the contract so far as any specific provision occurs!

It is provided here that neither excessive salaries nor excessive compensation of any kind should be paid by the contractor. Do you know what the salaries were that were set apart at that time?

Col. STEARNS. I do not know, no sir.

Mr. FREAR. Can you give the Committee the benefit of any information you have on that?

Col. STEARNS. We will have the exact figures later.

Mr. FREAR. Those will come this evening.

Col. STEARNS. Yes.

Mr. FREAR. There is a provision in article 6, beyond that, as follows:

Notwithstanding anything hereinbefore contained, the contractor may at any time before making or incurring liability for any expenditure for material, equipment, or supplies, or before making any subcontracts, or before purchasing any land or rights of way to be acquired by the performance hereof, exceeding \$25,000, give written notice of such intended expenditure to the engineer.

That is the engineer who was to be employed, as I understand, for the building of the railroad, who was the Government engineer or his representative.

And thereafter the officer in charge of the accounts section of the Spruce Production Division of the Signal Corps hereinafter referred to as the accounting officer, shall be precluded from questioning the propriety of the said expenditure unless the said Engineer or his representative shall, before the close of the fifth business day after service of notice of such intention express in writing his disapproval thereof.

In other words, if the engineer failed for any reason to give notice of this change that was contemplated or this liability that was contemplated by the contractor in excess of \$25,000 at any time, the Government would be held. There was no protection for the Government excepting this engineer, is that right? That may be a question of law?

Col. STEARNS. I would prefer not to answer that without going more into detail.

Mr. FREAR. I am reading now from Article VIII of the contract which reads in substance that all such records shall be kept in shape for ready reference and preservation for a period of six years after the completion of this contract. Is that being done? Are they keeping their records now, or do you know?

Col. STEARNS. Yes.

Mr. FREAR. Has your corporation got possession of them?

Col. STEARNS. We have not yet gotten possession of them. We have possession of most of our cost-plus records, or rather we expect to have them agreed to. I do not know in the case of the Siems-Carey-Kerbaugh Corporation whether arrangements have been made with them yet or not. It was our expectation, however, to take over all cost-plus records where the cost-plus contractor was willing to have such records under our custody. They were his records, of course, and we had no right to them without his consent.

Mr. FREAR. What protection would the Government have in examining the records in the hands of the contractor in determining whether the cost-plus contract was entered into properly unless the Government gets hold of the record? That is, these are matters that lie intimately in the hands and the knowledge of the contractor, would they not? That is, you could not tell whether a dishpan was bought or whether it was a car that was bought?

Col. STEARNS. We have our own records of a great deal of that kind of thing, and we have requested that our contractors that have settled up so far should turn over their records to our office. They all have agreed to do so with the exception of one contractor, and he preferred to hold his own records together, and stated—and truthfully stated—that he was the man who had to answer for the correctness of those records, and he had to answer a congressional committee just as much as we did, and therefore he preferred to have them in his own custody.

Mr. FREAR. What contractor was that that you are referring to?

Col. STEARNS. The Airplane Spruce Co.

Mr. FREAR. Who was that contractor?

Col. STEARNS. The Airplane Spruce Co.

Mr. FREAR. You do not know about the Siems-Carey-Kerbaugh Corporation?

Col. STEARNS. No; I might add, Mr. Frear, in this connection, that I had practically nothing to do with the production end of the business at the time this contract was being executed. My duties were practically all military at that time. I am hardly a valuable witness to you in this connection.

Mr. FREAR. That would be true so far as the relations of the entering into of the contract are concerned, but you were president of this corporation, and you are the chief officer responsible for the determination and settlement of the question between you and the contractor, and you naturally must have some knowledge of the terms of the contracts themselves. It was with that thought that the committee is pressing the question.

Col. STEARNS. When the time comes for settlement there will be an exhaustive study made of it.

Mr. FREAR. Article 6 provides that the Government shall provide at the work a competent engineer who shall pass upon all questions relating to the compliance of the work with the plans and specifications, and shall have power to interpret and to revise the plans and specifications, and all purchases of property, real and personal, and all subcontracts made by the contractor relating to the performance of this contract shall be subject to the approval of the said engineer, and his decision upon all of the above shall be final and binding upon the parties hereto.

Mr. FREAR. Who was the engineer?

Col. STEARNS. Mr. Sawyer, later commissioned; Maj. Mott Sawyer.

Mr. FREAR. What was his business when he was first employed?

Col. STEARNS. The railroad business, as I understand.

Mr. FREAR. Whereabouts, under what employment?

Col. STEARNS. He was with the Milwaukee Railroad. In just exactly what capacity I am not sure.

Mr. FREAR. He was an engineer with the Milwaukee Railroad?

Col. STEARNS. I do not know whether he was an engineer.

Mr. FREAR. He is an engineer, is he not?

Col. STEARNS. Now I understand he is assistant to the general manager.

Mr. FREAR. Of the Milwaukee Road?

Col. STEARNS. Yes, sir.

Mr. FREAR. And he was an employee of the Milwaukee Road before?

Col. STEARNS. Yes.

Mr. FREAR. He had the power under this contract to say as to the performance of the contract.

Col. STEARNS. Yes.

Mr. FREAR. So let us read his powers for the record:

He shall pass upon all questions relating to the compliance of the work with plans and specifications, and shall have power to interpret and revise the plans and specifications and all purchases of property real and personal, and all subcontracts made by the contractor relating to the performance of this contract shall be subject to the approval of the said engineer, and his decision upon all of the above shall be final and binding upon the parties hereto.

In other words, the Government of the United States is represented by your corporation. Sims-Carey & Co. had no right to interfere, could not change the terms of the contract, the character of the buildings of this railway, or the plans and specifications be-

cause they were entirely controlled by this engineer who was taken from the Milwaukee Road and is now employed by the Milwaukee Road. Is that right?

Col. STEARNS. Yes, that is true. Of course if there was anything serious it would have been taken over his head to Gen. Disque, but in ordinary matters that is perfectly true.

Mr. FREAR. What right had Gen. Disque to act in this? This gives the engineer the exclusive power.

Col. STEARNS. It would have been easy, Mr. Frear, to have a new engineer if his work had not been satisfactorily conducted.

Mr. FREAR. You did not make any change in the engineers?

Col. STEARNS. No sir, we were satisfied.

Mr. FREAR. You were perfectly satisfied with everything that was done by the engineer.

Col. STEARNS. As far as he was concerned—I do not know how the General feels about it, but I believe I speak for him when I say he was satisfied with the way Mr. Sawyer hired out his duties.

Mr. FREAR. I am simply questioning as regards the terms of the contract and the power that was exercised. Do you know of any other contract that your corporation let in which those terms are placed, giving those large powers?

Col. STEARNS. I do not know whether the contract so stated, but I do know Gen. Disque picked out the ablest men he could find to represent him on these different cost-plus operations, and gave them full authority to use their judgment with the understanding that they were to have his backing and to see that the Government's interests were carried out to the fullest, and he took sundry men who were experienced in their work, some of the ablest men in the lumber industry for these different positions. He picked Mr. Yeon—

The CHAIRMAN. Let us confine it to the engineers. Did he employ any Union Pacific engineer?

Col. STEARNS. When the question of where this road was to be located came up there was difference of opinion, apparently, where the best place would be, and you can readily see from the various routes opened, and in order to get an unbiased view of the matter I understand that—

Mr. FREAR. Do you know what you are going to testify to now? We have his testimony.

Col. STEARNS. I saw a letter written by Gen. Disque to the vice president of the Union Pacific Railroad requesting—

Mr. FREAR. Just strike that out, because it is not testimony; it was not sworn to, and you are raising the point that Mr. Disque requested only sworn testimony, and we are adhering to that. I asked you if you knew and you said that you saw a letter. I want something of your own knowledge, and you say you saw something in a letter. You see the point of the testimony which you have insisted upon we are simply applying at this time.

Mr. LEA. He was only testifying to what he saw in that letter.

Mr. FREAR. We want the letter not the judgment or recollection of the witness. We would be glad to have the letter. The statement of Mr. Disque is in the record, as I understand, in the Ray proceedings. My question was simple. I asked you, Colonel, if you knew whether he employed any engineer of the Union Pacific. Do you know of your own knowledge?

Col. STEARNS. Only as I told you, that I saw a letter requesting it.

Mr. FREAR. Requesting the engineer of the Union Pacific—

Col. STEARNS. Yes, sir.

Mr. FREAR. To act as an engineer of this railway?

Col. STEARNS. No, sir.

Mr. FREAR. Did he request any engineer of the Northern Pacific to act as engineer of this railroad?

Col STEARNS. Not that I know.

Mr. FREAR. Or any other railroad aside from the gentleman who was selected; you do not know of anyone else?

Col. STEARNS. I do not know of anyone else.

Mr. FREAR. Have you got the letter here?

Col STEARNS. No. I think you misunderstood me about the letter. It was not asking another engineer to serve; it was simply asking a disinterested party to make a report as to where the road ought to go.

Mr. FREAR. Oh, yes; I know about that; I have the testimony as to that.

(Thereupon, at 12.07 o'clock p. m., the committee took a recess until 2 o'clock p. m.)

AFTER RECESS.

The committee met, pursuant to the taking of recess, at 2 o'clock p. m.

TESTIMONY OF LIEUT. COL. CUTHBERT POWELL STEARNS— Continued.

Mr. FREAR. The railroad contract contains an article, No. 14, in which there is a provision that no more than eight hours in any one calendar day should be worked by any employees, with a violation for any additional time. Who put that in the contract?

Col. STEARNS. I do not know; somebody who had to do with drawing up the contract. I had nothing to do with the production end of it, and my connection with the contract will come later when the final settlement comes.

Mr. FREAR. Here was a contract made during the war under circumstances that called for the greatest efforts of every agency in carrying on that war. The soldiers at the front were giving all their time with no limitation, and here, way back 5,000 miles from the front, we find a contract given out holding the employees down to eight hours a day, when the Government, of all things, needed airplane stock and spruce, and all. I am just asking you how that happened to be written into this contract at that time, if you know, or if you have heard?

Col. STEARNS. If you ask my opinion, I think it was for the purpose of stabilizing the labor conditions, requiring that firm to work under the same arrangement that other firms producing logs and lumber were required to work.

Mr. FREAR. But did that apply to the Siems-Carey-Kerbaugh Co. and their work in their spruce contracts, or did it apply to any of the loggers in their contracts?

Col. STEARNS. They were all supposed to work under the same general conditions and hours as the rest of the industries.

Mr. FREAR. Then could they put in extra time, the employees?

Col. STEARNS. I do not remember whether any instructions were given for them to put in any extra time or not in this particular case. In some instances in the industry we directed extra time on certain mills that were getting out spruce for a period of a month or two. I am not in a position to state whether or not in the case of Siems-Carey that was so or not.

Mr. FREAR. You assumed the authority to say extra time should be employed?

Col. STEARNS. Yes, sir.

Mr. FREAR. In this case it does not appear, so far as I have read the contract, that extra time should be employed.

Mr. LEA. There is a provision in there, as I remember the contract, providing that that provision shall not apply in cases in which the Government declares that work is permissible, and the general law providing for eight hours in other than emergency work does not apply; they can declare it emergency work and there is not any limitation.

Mr. FREAR. It says emergency by fire, flood, etc.

Mr. LEA. You see, the general order was made after the war started, relieving contractors from this provision.

Mr. FREAR. You do not know, Colonel, whether in the case of Siems-Carey-Kerbaugh Co. they were relieved from this eight-hour provision?

Col. STEARNS. I do not know. As I say, I am not familiar with that end of it.

Mr. FREAR. You will concede as the representative of your corporation that there was nothing more imperative in getting out spruce from your standpoint than the building of the railroad at that time?

Col. STEARNS. That is correct.

Mr. FREAR. This railroad contract says, at the bottom of it, "Approved May 18, 1918, by the Secretary of War." On the copy which was sent to me there is a place for a signature, and on this copy which I am about to file there is no place for a signature. It is intended, however, I suppose, to mean that some one signed that, but it was not the Secretary of War necessarily, because the Secretary of War does not sign in that form?

Col. STEARNS. Yes, sir.

Mr. FREAR. I am just putting that in the record to show the fact.

Col. STEARNS. The place for approval should be there.

Mr. FREAR. So, where on the contract it says he did approve it, he did not as a matter of fact?

Col. STEARNS. No, sir.

Mr. FREAR. The supplemental agreement for advanced payments is attached to this contract and will be offered in evidence, together with the contract itself, to show the terms. That is signed by Siems-Carey-Kerbaugh Corporation by Capt. Crisp, representing the Government, and by Harvey Fisk & Sons, through Pliny Fisk, and is dated the 29th day of May, 1918. That is a supplemental contract which provides for advance payments to be made on the railway, is it?

Col. STEARNS. Yes, sir.

Mr. FREAR. I will introduce those in the record.

(The papers above referred to were marked "Exhibit C, Stearns. Aug. 20, 1919.")

Mr. FREAR. That railway as subsequently built was 36 miles in length?

Col. STEARNS. Yes, sir.

Mr. FREAR. How much of it was completed at the time of the signing of the armistice?

Col. STEARNS. It was all practically completed, sir, the 36 miles. The roadbed had to be adjusted, but it was practically complete.

Mr. FREAR. Were the rails laid?

Col. STEARNS. Yes, sir.

Mr. FREAR. The full length?

Col. STEARNS. Oh, at the signing of the armistice?

Mr. FREAR. Yes.

Col. STEARNS. No, sir. I can not tell you the exact state of completion at the time the armistice was signed, but I can get you that later. Will you get that, Mr. Walker?

Mr. WALKER. Yes, sir.

Mr. FREAR. You have been out over Clallam County and are familiar with the different parts of the country?

Col. STEARNS. Yes, sir.

Mr. FREAR. The Milwaukee Road for some years has been seeking an outlet to the West, has it not, from Twin?

Col. STEARNS. No, sir; I think they recognized the possibility of some day doing that; I do not know that they have actually been seeking an outlet at the present time, however.

Mr. FREAR. I say, for some years they have been considering the question of extending their road out beyond Twin toward Pysht and possibly around Clallam.

Col. STEARNS. With that I am not familiar; I am not informed.

Mr. FREAR. And you do not know anything about whether they had it in contemplation to reach down toward Grays Harbor, around this northern end of the peninsula?

Col. STEARNS. I know—I have heard Mr. Earling of the Milwaukee state in general terms that, of course, it was obvious when they went over into the peninsula that some day they would probably go on, but that was a general remark of that nature.

Mr. FREAR. I do not know whether you know or not that the Northern Pacific had some scheme or plan of the same kind in contemplation, reaching up from Grays Harbor.

Col. STEARNS. I heard general gossip or, rather, talk of that. I know nothing as to the actual fact.

Mr. FREAR. Into this section of undeveloped country where the timber lands are located would have the benefit of all that traffic over its own line, under ordinary circumstances, making, as you are well aware, the same rivalry that has existed for many years between railroads to reach the same terminal points, to reach the same markets to get the same advantage. I do not know how far you are familiar with that, but you do know that Earling of the Milwaukee suggested it was their purpose to go down there.

Col. STEARNS. Yes, sir.

Mr. FREAR. Do you know any of the routes that had been under consideration?

Col. STEARNS. Yes, sir; I know they did not want a route that we took for their extension.

Mr. FREAR. That is quite a knowledge on your part. That was suggested from the standpoint of the committee, if you know what the Milwaukee road wants.

Col. STEARNS. I will amend it by saying it has been said they did not want that, but I know nothing about what their wishes are one way or the other, so far as that extension is concerned.

Mr. FREAR. Do you know where Forks is?

Col. STEARNS. Not off-hand; no, sir.

Mr. FREAR. For the purpose of entering it into the record I introduce to be marked as an exhibit a map of Clallam County, and also of Jefferson County.

(The maps above referred to were marked "Exhibit D, for identification, Aug. 20, 1919.")

Mr. FREAR. The Milwaukee also extends from Port Angeles and across down to Port Townsend in a westerly direction over to what is known as Joyce Junction, about 14 miles?

Col. STEARNS. Yes, sir; it is about 14 miles.

Mr. FREAR. Fourteen miles from Port Angeles. How far is it from Port Angeles to Joyce?

Col. STEARNS. Fourteen miles.

Mr. FREAR. That branch of road was purchased by the Milwaukee Co. from another company, was it not?

Col. STEARNS. I am not familiar with that.

Mr. FREAR. You do not know whether the Port Angeles and a road that was formerly started out there was bought by the Milwaukee?

Col. STEARNS. I do not know whether they bought it or built it.

Mr. FREAR. From Joyce the Milwaukee had built on to Twin, then on to Deep Creek, where it extends to-day, did they not?

Col. STEARNS. I think so.

Mr. FREAR. How far is that from Joyce?

Col. STEARNS. Fifteen miles.

Mr. FREAR. Do you know why that extension was put through?

Col. STEARNS. I do not know exactly; no, sir. I surmise that it was their intention to go through—

Mr. FREAR. From Deep Creek?

Col. STEARNS. Yes, sir.

Mr. FREAR. You are not familiar with the fact, if it is a fact, that a good deal of the Milwaukee Land Co. timber was in that neighborhood?

Col. STEARNS. I did not know that to be a fact, or not.

Mr. FREAR. From Deep Creek to Pysht is how far; do you know?

Col. STEARNS. I do not know. I can look on the map. [examining map.] I should say it is about 6 miles.

Mr. FREAR. That the logging roads there of the Merrill & Ring Co. out of Pysht comes within about a mile or a mile and a half of the Deep Creek route now, according to the map, Exhibit D, which I have before me. That road extends over in a westerly direction to Pysht; and, do you know whether or not surveys have been made from Pysht up to Lake Pleasant?

Col. STEARNS. I have heard that that has been done.

Mr. FREAR. That would be up to the Pysht River; and it is about how far, would you say?

Col. STEARNS. I do not know.

Mr. FREAR. Fifteen or 16 miles; somewhere along there?

Col. STEARNS (examining map). I do not know.

Mr. FREAR. The Merrill & Ring Road, from the map before me, extends about 4 miles in a westerly direction, a logging road, parallel with the coast toward Clallam Bay. Are you familiar with that?

Col. STEARNS. I am not; no, sir.

Mr. FREAR. I am speaking from the map, and that brings that road inside the terminus of that logging road, within 2 miles of the Goodyear Road which runs from Clallam Bay. In other words, by extending the Milwaukee Road from Deep Creek, its western terminal to-day, to Clallam Bay, using the Merrill & Rings Roads and the Goodyear Roads so far as they can be in this connection it is only about 6 or 8 miles, so far as the map shows. Do you know whether that is correct or not?

Col. STEARNS. I do not know; no, sir.

Mr. FREAR. From Clallam Bay there has been a survey by the Milwaukee Road up Hoko River, has there not?

Col. STEARNS. I have heard that there was such a survey.

Mr. FREAR. And that survey will run how far from Clallam Bay up to what is marked as the spruce-colored tract upon the map that was prepared by your corporation? How far is it from Clallam Bay up to the edge of the spruce?

Col. STEARNS (examining map). There may be some spruce reached in that distance, but I do not know whether it is the kind of spruce we had to have or not.

Mr. FREAR. Are not you reaching the spruce you had to have within 5 miles of Twin today, or you were?

Col. STEARNS. Some of that spruce is there, yes.

Mr. FREAR. And there was spruce all the way from Deep Creek where the road runs today, all the way along there, is there not, until you come to Clallam Bay?

Col. STEARNS. There is spruce of some sort.

Mr. FREAR. Is it not spruce that is adaptable?

Col. STEARNS. I am not familiar with its quality. I have not cruised that country.

Mr. FREAR. I know you are not a cruiser or a logger, but the maps we have, containing the estimates, show the spruce all the way along. The spruce is of such a character, according to the maps which were given out by the Spruce Production Corporation, that within 5 miles of Deep Creek, the present terminal of the Milwaukee Road, approximately 50,000,000 feet of spruce is to be had. Is that not true?

Col. STEARNS. I do not remember the figure.

Mr. FREAR. I do not attempt to say it is all airplane stock; I am just speaking about what your map discloses, and the estimate has been made with reasonable effort to come at some basis. Within 10 miles of the terminal at Deep Creek, running in a westerly direction to make the connection, is it not true that your map here shows up as far as East Fork, which is about 3 miles from the water, a stand of about 100,000,000 feet of spruce, according to the estimates.

Col. STEARNS. I am not familiar with those figures.

Mr. FREAR. On section 12 of the Merrill & Ring land, 1 mile west of the Pysht River, where the road could run to Lake Pleasant if desired, and within 3 miles of the coast, is a section containing 17,292,800 feet of spruce, on that one section. That is section 12, if your map is correct. You have never made an examination of it?

Col. STEARNS. I am not personally familiar with that. That whole matter has been investigated by the department and we have men who are familiar with all those facts, but I personally had nothing to do with making any decisions in connection with that spruce.

Mr. FREAR. And that section 12 is within three quarters of a mile of the present Merrill & Ring Road running west?

Mr. LEA. I suggest that we ought to ask these questions of a witness who knows something about the facts.

Mr. FREAR. Here is the map, and it was for the purpose of making the record that I asked the question.

Mr. LEA. The map can speak for itself. I do not see any advantage gained in asking questions of a witness who knows nothing about it, as to what is on a map.

Mr. FREAR. This is the advantage: The witness says to the committee, "I was not striking the spruce." That was his own proposition. Now, I am asking him on cross-examination to ascertain his judgment as to whether there is spruce here, and here is the map that was prepared by the corporation.

Col. STEARNS. I did not say that we were not striking spruce; I say I do not know if they were striking spruce.

Mr. FREAR. I see. I am presenting the state of facts for the witness to testify to.

Mr. LEA. He says he doesn't know. I think we are just wasting time.

Mr. FREAR. We are not wasting time. I think this time is valuably employed. If the Milwaukee Road had extended from Twin and joined in with these other logging roads and gone up the Hoko River, it would have taken less than 20 miles of logging road to have reached up into that section, wouldn't it? New road?

Col. STEARNS. I am not in a position to state, sir.

Mr. FREAR. That is the map, here. And that is the tract of land that you had marked here, surrounding Lake Pleasant. You are familiar with this map?

Col. STEARNS. Yes, sir.

Mr. FREAR. And that would reach this tract, and was one of the surveys of the Milwaukee Road. It is marked here upon this map. It is marked on this map that you have here, "Milwaukee Railroad survey," up the Hoko River. It goes through there and goes down to Forks?

Col. STEARNS. Yes, sir.

Mr. FREAR. Instead of taking that road, which strikes, according to the testimony that has already been placed before the Ray hearings, instead of taking a road that struck spruce within 5 miles and continually ran through spruce until it reached this Lake Pleasant region, the road was diverted from Joyce Junction along Crescent Lake, the other route, and through tunnels and through cuts over to Pleasant Lake, a distance, as you say, of 36 miles, at a cost of over \$600,000 a mile. What was the purpose of that, if you know?

Col. STEARNS. I suggest, Mr. Frear, that you ask the man who made those decisions concerning that policy. All I know is a matter of hearsay, and not a subject for proper——

Mr. FREAR. That is fair. Who was the man that made the decision?

Col. STEARNS. Gen. Disque. As I understand it, he is prepared to explain that.

Mr. FREAR. This contract was taken to the East, was it not?

Col. STEARNS. Taken to the what?

Mr. FREAR. Taken east. This contract for the building of the railroad was sent East, was it not?

Col. STEARNS. Yes, sir.

Mr. FREAR. Were there changes made in the contract; did you hear about that?

Col. STEARNS. I heard that there were changes made, to the benefit of the Government.

Mr. FREAR. That is, you suppose they were to the benefit of the Government?

Col. STEARNS. I heard that they were to the benefit of the Government.

Mr. FREAR. You heard they were?

Col. STEARNS. I don't know of my own volition whether that was so.

Mr. FREAR. And any changes that were made there, you understood that Disque approved those changes afterwards?

Col. STEARNS. I understood that he did.

Mr. FREAR. The testimony taken before the Ray committee—I do not know whether you are familiar with it or not—was that this road runs nearly 40 miles before it strikes spruce. Do you know anything about that?

Col. STEARNS. I do not.

Mr. FREAR. That is, I mean the road as eventually built to Lake Pleasant. I will introduce in the record and offer it as an exhibit this map that I have been referring to. The map is introduced with the marginal distance table, which relates to the highway road distances between the points stated on the map.

(Map referred to received in evidence and marked "Exhibit E.")

Mr. LEA. You are going to another subject now?

Mr. FREAR. I expect to now.

Mr. LEA. I would suggest that that letter that you offered this morning be put in as an exhibit.

Mr. FREAR. I thought it was.

Mr. LEA. To make the record clear, it is understood that that letter that was marked as an exhibit this morning is to be considered in evidence.

Mr. FREAR. Surely, yes. It was offered in evidence and I supposed it was there. I haven't it. The Forestry Division furnished a statement to Disque during the times that you were engaged in studying this spruce situation, one statement signed by Smith Nelson, and other statements signed by Cecil. Do you remember those?

Col. STEARNS. I heard that there were such reports submitted. I did not see them.

Mr. FREAR. The report, the forester's statement, is here. I only wish to quote briefly from it, and I am quoting from set 4, that was

contained in the Ray report. They give comparisons here of the amount of spruce cut during 1916 and 1917. Do you remember what that cut was? That was before Mr. Disque came and took charge, or Capt. Disque at that time. I can give them to you briefly; there were 317,000,000 both years, in Oregon and Washington; both States.

Col. STEARNS. That is logs that you are speaking of?

Mr. FREAR. The logging I am speaking of; yes. Do you recall that that was the amount?

Col. STEARNS. I do not, sir; I do not know. I think we have the figures right here.

Mr. FREAR. My desire is to get it, just to make the record.

Col. STEARNS (referring to memorandum). 317,000,000 in 1916 and 319,000,000 in 1917.

Mr. FREAR. That is close enough. In other words, the 1917 cut of spruce was practically the same as 1916, or just slightly larger. That is true, is it not?

Col. STEARNS. Yes, sir. That was at a time when we were having very serious labor troubles.

Mr. FREAR. You were having serious labor troubles out here on the coast in 1917?

Col. STEARNS. Yes, sir.

Mr. FREAR. Otherwise the spruce cut might have been much larger?

Col. STEARNS. Possibly.

Mr. FREAR. Yes, that is the conclusion, as I take it, from the forester's statement. He gives the 1916 cut at 317,540,000; the 1917 cut at 317,718,000, practically the same. Do you know what proportion of spruce was contained in the annual output of timber at that time?

Col. STEARNS. I think we have it here. Here are the figures right here, Mr. Frear, the character and distribution of the 1918 lumber cut of Washington and Oregon, producing and consuming regions.

Mr. FREAR. 1918?

Col. STEARNS. 1915, 1916, 1917, and 1918.

Mr. FREAR. Yes. Now, what proportion of the annual output in 1917, for instance, was spruce?

Col. STEARNS. 319,000,000 out of 6,789,000,000 feet of all species.

Mr. FREAR. Just about six per cent, as he figures here?

Col. STEARNS. Yes sir.

Mr. FREAR. Of the total output?

Col. STEARNS. Yes sir.

Mr. FREAR. Of the spruce cut in 1917, have you a statement of the character of spruce, that is, what proportion was high grade?

Col. STEARNS. No, sir. We have never been able to ascertain exactly what percentage of the spruce obtained at that time went into the finished airplanes, but we have letters from men who were out here before we came, and their estimate was from 15 to 20 per cent.

Mr. FREAR. That is as the forestry gives it.

Col. STEARNS. It is very difficult to ascertain, and that is just an estimate.

Mr. FREAR. I think it is generally agreed that it was in the neighborhood of 15 per cent; that is, that is what they say. On page 18 of this Forester's report that was submitted in the Ray hearing, which is signed by Smith, forest supervisor, and L. A. Nelson, logging engineer, appears a statement of the cut of spruce for the months of

September, October, and November, of 1917, of 10,430,000 feet. The months of December, January, February, March, and April are given with the total of April, 1918, of 5,000,000 feet. Under the statement of 5,000,000 feet for April, 1918, it is stated by the Forester's report:

An additional amount of approximately 4,000,000 feet of G-list was shipped, and also about 4,300,000 feet of clear fir wing beam stock, making a total of over 13,000,000 feet, or enough for from 8,000 to 10,000 planes.

My purpose in asking this question is to find if you know, or if there is anyone who can explain, outside of the forester, who is present, whether or not a sufficient amount of spruce had been cut in April, 1918, to have constructed 10,000 planes with the fir which goes into the training planes, the elementary planes?

Col. STEARNS. I might say, without looking at any figures on that, that it is impossible for anybody to state one way or the other, for this reason; that that stuff was shipped, you know, two thirds of it, to the Allies, going across the seas. Some of it, in all probability, was lost at sea. Some of it was probably spoiled in transit, due to the dampness. The different specifications and the unfamiliarity among the experts with the difficulties encountered in securing it possibly caused undue waste. There are dozens of unforeseen items that can come in there that will make it impossible to state definitely whether the stuff could have made that number of planes or not. We estimated that from five hundred to a thousand feet, somewhere, went into an airplane. Now, our production was based on requirements from Washington. We got out what we were told to get out. We tried, as our organization got better developed, to keep in touch with the factories and find out their wants, and succeeded quite well, especially toward the latter part in keeping in close cooperation with them. But in the early days it was a new game, even to the Allies, and everybody was feeling their way, and it was a little difficult to get actual facts, just exactly all the details that were necessary for its manufacture out here.

Mr. FREAR. In other words, there was confusion all along the line?

Col. STEARNS. Absolutely, sir.

Mr. FREAR. If this statement, of course, contained in the forester's report is true, in that one month of April they could have furnished enough spruce and fir for the other training machines.

Acidity.—Measure 50 c.c. of alcohol into an Erlenmeyer flask. has to go in, and that statement does not state the quality of stuff that was shipped, and that is a very, very, very material item.

Mr. FREAR. What have you to say of the stuff that you did cut and ship as to the percentage that was used, so far as you know?

Col. STEARNS. I have, as you know, or possibly you don't know, but I will tell you, systems of reports that were made at the factories. This system developed as our program developed, and during the fall and late summer of 1918 we received these reports. I have them all here. There were over 100 fir reports.

Mr. FREAR. That is, on fir material?

Col. STEARNS. Fir airplanes.

Mr. FREAR. Elementary training planes?

Col. STEARNS. Yes, sir. They indicate that of the stuff that went from the cut up plant over 92 per cent was accepted, and less than 4 per cent was rejected.

Mr. FREAR. That is, of fir?

Col. STEARNS. That was fir.

Mr. FREAR. Where did that go to, what plants?

Col. STEARNS. Those reports came from the principal airplane factories, the Curtiss, the Standard, and all the principle ones. The spruce reports, there were fewer of those came in, but summarizing all that did come in, only three-tenths of one per cent was rejected.

Mr. FREAR. Of the spruce?

Col. STEARNS. Of the spruce, only three-tenths, approximately, of one per cent was rejected from the stuff that went from airplane, and those reports, gentlemen, I have here for your investigation if you desire to see them.

Mr. FREAR. Did you not receive, and have you not in your files to-day, a report or statement that 60 per cent of a shipment made to Great Britain was refused?

Col. STEARNS. That possibly was in the early days. It may possibly be in our files. I have no definite knowledge of it.

Mr. FREAR. As late as August, 1918?

Col. STEARNS. I have no knowledge of it. I will investigate, sir.

Mr. FREAR. Is it not true that possibly at an early day the Curtiss Co. and the Grand Rapid companies, and other companies using airplane stuff, refused large quantities that were shipped from here?

Col. STEARNS. That is very true. That is why we were ordered here, to straighten that situation out if possible. I think we did, as evidenced by these reports that I quoted.

Mr. FREAR. But if the report is true that Great Britain in one case refused to accept 60 per cent, if that statement can be shown from your own records, and your report here shows that it is less than 1 per cent, there is something radically wrong?

Col. STEARNS. I stated at the beginning that we do not have all the reports, anything like all the reports. These are all the reports that we received, and this service of reporting was only started from August on. All we have I have here. There are 100 on the fir, and probably less than 30 of them for the spruce, but basing our information on these reports, which is all we have to go by, those are the results. Now, there is no doubt, gentlemen, that in the days before that there was no such good quality going out. We do not pretend to state for an instant that there was. This was a matter where we were all endeavoring to improve the situation.

Mr. FREAR. Who furnished these reports?

Col. STEARNS. They were furnished by the inspectors at the factories at which the spruce and fir was received.

Mr. FREAR. The inspectors for the companies that were purchasing?

Col. STEARNS. The government inspectors, sir.

Mr. FREAR. Oh, the government inspectors?

Col. STEARNS. Yes.

Mr. FREAR. That is, the government inspector might pass on it and the inspector for the company might refuse it?

Col. STEARNS. I think it was the same man, Mr. Frear, I am not positive, however, of that.

Mr. FREAR. Did they use the same man in the case of the Curtiss Co., and some of the others.

Col. STEARNS. I am not familiar.

Mr. FREAR. Wasn't there a dual system of inspection carried on, one representing the company and the other representing the Government?

Col. STEARNS. I am not prepared to say that, sir, I do not know how they did it.

Mr. FREAR. Here is a statement taken from your records at Portland, known as the Washington spruce files, under date of August 15, 1918, from Maj. Ledbetter, from Aircraft Production No. 39. The suggestion is that that is the name of an officer in Washington. In this statement it recites:

The cable from England saying that sixty per cent of the fir and spruce from the United States, upon inspection, were rejected.

Col. STEARNS. I will look that fact up, Mr. Frear, I do not know about that.

Mr. FREAR. I was going to say, if you will see whether or not this statement is in it.

Col. STEARNS. In all these cases, I might say, where we have traced them down, we have found where the complaints came that there were almost none from the material that was shipped from the cut up plant. There was a good deal of complaining in regard to the material that we shipped from the outside mills until we could get them all going under the same system of sawing. They were gradually improved from time to time.

Mr. FREAR. When did you begin shipping from the cut-up plant?

Col. STEARNS. I can not give you the exact date, but it was approximately around the 1st of March, I think, or the middle of March.

Mr. FREAR. March, 1918?

Col. STEARNS. Yes, and then, of course, the method of sawing and the amount of airplane stock constantly improved as our experiments in that line continued. It was a new game, remember, to every man, not only ourselves but all these lumbermen on the coast. It was new to them. They were working with us, trying to find the best way to do this thing, and it was largely, principally, through their valiant efforts to cooperate that we managed to increase that percentage.

Mr. FREAR. Of course, if this statement of August 15, 1918, is true it will show that the percentage was still pretty low, so far as the spruce that was sent over to Great Britain is concerned.

Col. STEARNS. I have heard it stated, merely by hearsay, that that was a shipment of G list, asked for by England, and that report was the report of an inspector who thought it was the other, but I will get the exact facts on that for you as soon as possible.

Mr. FREAR. It does not limit it, apparently, to any particular time, and that is the reason I was wondering.

Mr. LEA. Does it refer to G list or not?

Mr. FREAR. No. This is my memorandum.

Mr. LEA. Your figures, as I understand it, refer to cut-up plant product.

Col. STEARNS. My figures that I gave you, yes sir, they do. That was only part of the shipment, however.

Mr. FREAR. What proportion —

Col. STEARNS. Just a minute—I can not give you that. I can have it tabulated, though, and endeavor to find out. There were not many

million feet in that report, as I previously stated, but it is the only report we have from unbiased parties. That is why I gave it to you.

Mr. FREAR. I am reading from page 7 of Nelson's report. This has reference specifically to what we have been discussing in the testimony regarding the spruce in this section covered by the proposed railway running along near the coast, up to Lake Pleasant, running up from Deep Creek or the Pysht River, or wherever they may have selected it. He says, on page 7 of his report here, which was contained in the Ray report:

The spruce region of this county lies west of range 10 west, practically every section containing spruce. The heaviest stand of best quality occurs in townships 29, 30, 31, ranges 12, 13, 14 west. The remainder is a uniformly heavy stand of fair to good quality. This timber can be exploited by several routes. The timber in town 31 north, range 10 west, is developed by the Chicago, Milwaukee & St. Paul Railroad; town 31, range 11 west by the Merrill & Ring Logging Co. railroad; and townships 31-32, range 12 west by the Goodyear Logging Co.

They are logging at Clallam Bay.

The Chicago, Milwaukee & St. Paul Railway hauls logs to Port Angeles and dumps them at the mill there. The Merrill & Ring Co. dump into the bay at Pysht, and the Goodyear Logging Co. into Clallam Bay. The logs from these two operations are towed to the mills on Puget Sound.

If Clallam Bay is inside of 14 to 15 miles from this spruce that was mentioned, the spruce could have been taken right to Clallam Bay and rafted there, as is done to-day by the Goodyear Co., which is doing business there, and rafted down to Port Angeles, could it not?

Col. STEARNS. Yes sir, but I suppose you know we have a projected survey from the end of our line to the bay, whereby, if we could not have gotten suitable trackage arrangements with the Milwaukee, we intended to continue that 2 or 3 miles there and put our logs into the bay at that point and tow them around to Port Angeles.

Mr. FREAR. I understand. It would not have been necessary to have made any such arrangements, however, if the logs were towed from Clallam Bay, they could have been towed around to all of the numerous mills.

Col. STEARNS. No, but, Mr. Frear, your investigation will disclose that there were very important engineering difficulties that demanded the route we took; there is no doubt of that, from an engineer's point of view, and when we get into that with our engineers, I am convinced you will be perfectly satisfied with the route that was taken, from an engineering point of view. It was the only route for our purpose. I am convinced that you will be convinced when that testimony is brought out.

Mr. FREAR. I am glad you have confidence in the persuasive power of the engineer, notwithstanding that for years this plan had been considered by the various companies of going up these various lines, up Deep Creek, up Pysht Creek, and up the Hoko River, and the switch from one route to the other occurred within about thirty days.

Col. STEARNS. On the advice of disinterested engineers.

Mr. FREAR. And with all the engineers before them, in all the past time, this other route had been considered not only feasible by the engineers of the railway company, but as desirable.

Col. STEARNS. For their purpose, Mr. Frear; but not for ours; and ours was a very different purpose, as you will see when the matter is brought out clearly.

Mr. FREAR. Yes; that is to say, the production of spruce, as you people undertook to produce it, required a railroad like the one that you have there to-day, costing over \$100,000 a mile, and it had to be put through that section, in your judgment?

Col. STEARNS. Yes, sir.

Mr. FREAR. Were all the railroads that were hauling spruce of that type?

Col. STEARNS. All railroads that were going to haul the amount of spruce at the times, during the seasons and under the conditions that we were, would have to be of that type, if they were going to be maintained without break at the time when the production of lumber must not in any degree be stopped. If it were stopped for any time, it meant the shutting down of the factories all over the United States and Europe; and when that operation was going full tilt and going hard it was on that operation mainly, backed up by those in Oregon, that we were going to depend for our airplane lumber for the airplane program that our allies and ourselves had mapped out; there must not be a single day's delay, and it was with that understanding that that good road, and that road over a route that could not be washed out, was picked.

Mr. FREAR. You have made an argument, a long, extended argument, and you have passed upon a proposition that never came before you; isn't that true?

Col. STEARNS. I didn't pass on that.

Mr. FREAR. Did you have any voice in the decision?

Col. STEARNS. I am talking from general information.

Mr. FREAR. Did you have a voice in the decision in passing on it?

Col. STEARNS. No.

Mr. FREAR. When did you first find it was necessary to take that route, in your own judgment?

Col. STEARNS. After I had talked with our engineers about it. All I know, as I have stated before, is from hearsay; but I am convinced that that hearsay is correct.

Mr. FREAR. There is no road that has ever been built since the beginning of time but what might have something to interfere with its operation; that is true, isn't it?

Col. STEARNS. Might have what?

[Question read by the stenographer.]

Col. STEARNS. Yes; but we were not building for something that might happen; we were building for a definite purpose, with the understanding that if that road were stopped we would have to answer for the cessation—for that lumber stopping. It was a military problem—the continuation of that lumber coming out.

Mr. FREAR. It was a military problem about getting airplane stuff anywhere, not about that road alone; a military problem of getting it down in Oregon; a military problem of getting it to the Vancouver cut-up plant.

Col. STEARNS. Yes; but we are talking about that road now.

Mr. FREAR. Of course, it was a military problem all along the line.

Col. STEARNS. Yes.

Mr. FREAR. We all recognize that; no more in this case than anything else, except as to what quantity might be brought out.

He says, in his statement:

The Chicago, Milwaukee & St. Paul—

reading from page 7—

can be extended from its present terminus in town 31 north, range 10 west, to the spruce belt to the west and south, either up the Pysht River and across the divide into the Solduc Valley, and down it, or west to the Hoko Valley, up it and down Dickey River Valley and then on south. The distance from Pysht to Lake Pleasant in the Solduc Valley is 40 miles. Branch lines from these roads would reach the main bodies of spruce.

If there had been a desire to build this road across the route that was finally decided upon, and if the Milwaukee road was seeking to get a road to Grays Harbor, the route taken would cut off nearly 50 miles, would it not, and give a splendid road for the use of that railway company, at the expiration of the war, when hostilities ceased?

Col. STEARNS. Well, sir, if you investigate that further you will find that that road leaves them with a little bobtail spur up the coast. It will also take them through less productive country—I mean immediately productive—than that through which they would go. I don't think the Milwaukee, if they were ever going to build a line, would ever build it over that route.

Mr. FREAR. That is true, unquestionably, if built at their own expense, on the standard that was provided by the government, by the sale of Liberty bonds.

Col. STEARNS. You may add: In the disposal of those properties, we, acting in protection of the government, have required that they will not be sold except under approximately reproduction value; no one is going to get those roads as a gift, not by any chance, because I am the fellow that has to make the approval of the bid.

Mr. FREAR. Do you, as a man without any previous business experience in your life, sitting here with millions of dollars in your control—

Col. STEARNS. Surrounded by—

Mr. FREAR. Wait. [Continuing] Make the statement to this committee that that road is not to be sold excepting at the price it can be reproduced for?

Col. STEARNS. I didn't.

Mr. FREAR. What is your statement?

Col. STEARNS. I said approximately reproduction value, and I—

Mr. FREAR. What do you hold that at?

Col. STEARNS. I also state I am surrounded by the ablest lumbermen advisers in this section, and I would not take any such action without consulting those men, even if I am an Army officer.

Mr. FREAR. You mean to say, if the committee understands you right, that this road will not be sold at less than \$100,000—

Col. STEARNS. I have no claim like that.

Mr. FREAR (continuing). The cost of reproduction. It cost more to do it than it did when that road was built, does it not?

Col. STEARNS. I have entire reproduction values and have it locked in the safe. When the time comes we will consult them and see—

Mr. FREAR. And you, without any previous business experience along that line, have in your hands entire control in the determination of the sale of all these railways and all these mills; is that right?

Col. STEARNS. Absolutely no.

Mr. FREAR. Who were?

Col. STEARNS. My board of directors, and in a case of this kind that thing would be forwarded to the War Department for final approval.

Mr. FREAR. What action was taken by your board of directors in regard to the sale?

Col. STEARNS. What action?

Mr. FREAR. Yes.

Col. STEARNS. I don't understand what you mean.

Mr. FREAR. What minutes were passed in regard to the sale of this road and in regard to all these sales? I asked to have that brought up. I don't know whether you brought it or not.

Col. STEARNS. I misunderstood you in your wire. I thought you meant the minutes with respect to the letting of the contracts.

Mr. FREAR. I would be glad to get that.

Col. STEARNS. Those contracts were let before the corporation was formed.

Mr. FREAR. Oh, so you have no minutes of the proceedings?

Col. STEARNS. The board of directors approves, however, of my action. They can have a vote secured on that—I mean the way we are advertising—if you desire. They have been consulted with freely.

Mr. FREAR. What I am endeavoring to understand is who passes on the sale to-day?

Col. STEARNS. The board of directors will make its recommendation to the Secretary of War.

Mr. FREAR. I want to know what action appears upon your minutes, as to who has the authority to make the sale to-day. Is the board of directors going to determine every little sale of a thousand feet or a million feet of timber?

Col. STEARNS. Do you mean the equipment—

Mr. FREAR. What you have there, yes; is it in your hands, or whose?

Col. STEARNS. The main properties—the real properties—are advertised for sale, under sealed bids. The other equipment was advertised for sale, or, rather, the major part of it; that was catalogued at that time, was advertised for sale. The bids were too low for us to conscientiously think of accepting them.

Mr. FREAR. What proportion were they?

Col. STEARNS. Oh, I don't believe they aggregated \$30,000 for possibly \$5,000,000 worth of stuff; the bids that came in, we couldn't think of it, it would have been criminal for us to do such a thing. So we adopted a course, which is a more difficult one, but was the only honorable one to pursue, which was to organize as efficient a sales department as we possibly could, and sell this equipment at the very best prices we could, and that was the policy we have been pursuing. We organized a sales department, and we have been selling this equipment at the very best price we possibly could obtain for it, getting for the government a great deal more than we ever anticipated; always running a risk—always laying ourselves open to the fact that perhaps there were—somebody maybe had a graft at this, but under the circumstances it was the only honorable way to handle it. We could not accept the bids received.

Mr. FREAR. I am not asking these questions in a tone of criticism, but to ascertain what the business method is in this corporation, of disposing of what is practically government material.

Col. STEARNS. We have around us the best experts that we can gather together here to appraise those values—that equipment. The most of that stuff is congregated at Vancouver Barracks. We have a corps of experts down there to appraise the values of that, and we are getting the best figures we can.

Mr. FREAR. I understand from you, then, that you make the statement that these railroads and these mills are not to be sold excepting for—

Col. STEARNS. Excepting under sealed bid.

Mr. FREAR. No, excepting under, as I understood you, the receipt of sealed bids; that will reach up practically to the cost of reproduction.

Col. STEARNS. Approximate cost of reproduction.

Mr. FREAR. Why did you buy the Blodgett tract on December 2, when the armistice occurred on November 11?

Col. STEARNS. For the simple reason that we had a railroad to the Blodgett tract, and we had an option to buy that tract, and we had an option to buy it cheap, and if we hadn't bought that track we would have had a railroad that we would have had to give over to Mr. Blodgett or anybody else that wanted it; and the result is we can get something back on our railroad, and we can probably sell that timber tract for more than we paid for it.

Mr. FREAR. In other words, you forced Blodgett to sell so that you could sell a railroad that had been built down there; that is true, isn't it? Blodgett protested against the sale, didn't he? He didn't want to sell? Your correspondence shows that, don't it?

Col. STEARNS. He was not especially desirous of selling, but the contract had been closed. Neither could we have given Mr. Blodgett a million dollars, or more, of a railroad. Which would we be criticized more for, giving him a million-dollar railroad or buying the timber tract?

Mr. FREAR. I am not questioning the judgment that was finally exercised, but I am pointing out the fact that you folks built a 24-mile railroad down there, going from nowhere to nowhere else, until after the armistice was signed; a month afterwards, or thereabouts, against Mr. Blodgett's protest, you took his tract. I am asking if you propose to hold that railroad until you get the cost of reproduction?

Col. STEARNS. Approximately so, yes, sir.

Mr. MAGEE. Suppose you never get it, then what?

Col. STEARNS. Well, we will have done our duty to the very limit.

Mr. MAGEE. That doesn't answer the question. You say you are going to hold it until you get the cost of reproduction. Suppose you can not get it?

Col. STEARNS. I haven't finished my statement. We have done our duty when we have—

Mr. MAGEE. I have asked you a fair question. You say you are going to get reproduction cost. Now, I ask you, if you can't get reproduction cost, then what are you going to do? You certainly can tell me that?

Col. STEARNS. Well, we will endeavor to promote the sale of that at the very best price we can, and if that sale is not—

Mr. MAGEE. You mean, you will sell it then at the price you can get?

Col. STEARNS. No; and if that sale is what the board of directors considers proper, and the Secretary of War considers proper to dispose of it, we will then have to cross the other bridge of what we will ultimately do with it. I have still hopes of selling it, but I have not decided.

Mr. MAGEE. The ultimate bridge that you speak about crossing is what you can get for the property.

Col. STEARNS. Yes.

Mr. MAGEE. So, when you talk about this reproduction—getting the reproduction cost—that is nothing more or less, in ordinary parlance, than “hot air,” is it?

Col. STEARNS. I don’t say actual reproduction; I say approximate reproduction. We will take into consideration a great many things there.

Mr. MAGEE. In addition to that, is it not a fact that if your board should approve the price at which it would be willing to sell a certain property, if the War Department didn’t approve of that, then the sale would not go through?

Col. STEARNS. Possibly so.

Mr. MAGEE. That is so, isn’t it? Not “possibly,” but it is a fact. In other words—

Col. STEARNS. Yes; that is a fact.

Mr. MAGEE (continuing). Is the War Department superior to your board?

Col. STEARNS. I consider that it is, for the reason that they vote the stock under which we are operating, and the board of directors would not ever care to take the responsibility of going beyond the wishes of the Secretary of War in this matter.

Mr. MAGEE. What I want to get at is, as a matter of fact, whether you take the position that your authority is superior to the authority of the War Department?

Col. STEARNS. We do not. I just stated we do not.

Mr. MAGEE. It is plain to you, isn’t it, that ultimately this road, which has been built from Lake Crescent to Lake Pleasant, 36 miles, at an expenditure of \$112,000 or \$113,000 a mile—it is apparent to you, isn’t it that the only ultimate purchaser, and that the ultimate purchaser will be the Chicago, Milwaukee & St. Paul Railroad Co.!

Col. STEARNS. It is not apparent to-day that they may purchase that from this corporation or from the Government. It is conceivable that it may pass through several hands before it went to them, if they ever get it.

Mr. MAGEE. Ultimately, they are the only purchasers?

Col. STEARNS. If they want it, that is possibly so.

Mr. MAGEE. What other purchaser is there for this property?

Col STEARNS. You might make the same statement—

Mr. MAGEE (continuing). At a cost of \$4,000,000?

Col STEARNS. You can make the same statement about any road we might ever have built. Every road has to tap a main line somewhere, and it has to go from private operation somewhere.

Mr. MAGEE. I don't care for the argument. I simply came out here to look at it. But the way it seems to me is, if I were you, backing up this proposition or any other gentleman backing it up, I would be a good sport and admit what is apparent to everybody.

Col. STEARNS. I don't see what is apparent to everybody, Mr. Magee.

Mr. MAGEE. And your authority is subject to the authority—

Col. STEARNS. Absolutely.

Mr. MAGEE (continuing). And approval and order of the War Department?

Col. STEARNS. Absolutely.

Mr. MAGEE. When you talk about what you can do and what you would do when you are here to-day and you may be 2,000 or 3,000 miles from here four or six weeks from now, there is not any force, is there, to such a suggestion as that?

Col. STEARNS. I don't quite get what you are referring to, Mr. Magee, but—

Mr. MAGEE. You stated here that this property would not be sold, in any event, at less than its reproduction cost, because you were going to see that it should not be sold at less.

Col. STEARNS. While I am on this job that is the case. I say approximate reproduction. I don't say that they have got to come up to my figures.

Mr. MAGEE. As a matter of fact, you haven't anything to do with it, have you, except as you may be here temporarily in charge?

Col. STEARNS. Exactly so.

Mr. MAGEE. You might receive orders from the Secretary of War to be transferred to some other place?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Then your successor might have an entirely different view of it?

Col. STEARNS. Yes, sir. He would be guided, though, by the board of directors.

Mr. FREAR. Will you tell us of any logging company or manufacturing company, that you know of, that is going to pay the approximate value—reproduction value of the road, extending from Lake Crescent to Lake Pleasant?

Col. STEARNS. I don't know of any, Mr. Frear.

Mr. FREAR. Isn't it likely that we will hold that road for 20 years to come, if we wait in order to get the approximate value, unless the Milwaukee Road, directly or indirectly, seeks to secure the purchase?

Col. STEARNS. There are several concerns that are interested in that, that are not Milwaukee. I might go and name several. I don't think it would be fair to those gentlemen to put their names before the public, because they will make their own bid, in time, and it will be made public, in time.

Mr. FREAR. The committee would consider it improper if you did. That is very fair. What we wish to say is this, however: When you are getting a road at \$100,000 a mile, or \$4,000,000 for a 36-mile road, there has got to be something at the other end. Either the people own all of the timber, and then they are not going to pay such an enormous amount to get it out, because they can drag it out down the Hoko River. They can get it down into Clallam Bay for \$100,000,

or a little over \$200,000 or \$300,000, at the outside; they are not going to spend that amount of money to get their timber out. So it must be, if it is people like a transcontinental road, and is a cut-off, as it seems to be from the map, it must eventually fall into the hands of the road that has the nearest trunk line. Isn't that reasonable? That was the suggestion of Ray in his report, in the findings. I don't see any danger in your conceding it, because we are asking you, because you are president of this corporation, and that is the finding—

Col. STEARNS. You ask me if I think they will eventually get hold of it. It is probable that they will eventually get hold of it; but you asked my opinion whether they will get hold of it from the Government. I think it is improbable that they will. They may eventually get hold of that road, but I don't think they will get it from us.

Mr. MAGEE. What you think is that they will exercise their own judgment in doing their own business in their own way?

Col. STEARNS. Yes, sir.

Mr. FREAR. As they did in building trackage through the Milwaukee Land Co.'s holdings.

Col. STEARNS. The only thing I can say in that connection is that the same argument will apply to our Southern roads and our connection with the Southern Pacific, and the same argument would apply to possibly any road we might have built; the same ulterior motive might be said to be in any road that we might have built.

Mr. FREAR. What is the cost, per mile, of the road that runs down to the Blodgett tract, if you have that in mind, approximately? Was that built as a logging road or was it built as a part of the Southern Pacific system?

Col. STEARNS. That was a very different proposition. That was not a road built for an operation anything like the size of this Clallam operation—anything like the size.

Mr. FREAR. Well, let's see how much it was. Your Toledo mill was to cut 250,000 feet per day, and your cut-up plant here at Port Angeles, that you built, was to cut 400,000 feet per day.

Col. STEARNS. That lower road cost about \$90,000.

Mr. FREAR. \$90,000?

Col. STEARNS. And the upper one \$71,000.

Mr. FREAR. And the upper one, along the beach, \$71,000?

Col. STEARNS. They are both along the beach. One runs up and the other runs down. That is the cost per mile.

Mr. FREAR. Without equipment or terminals of any kind?

Col. STEARNS. Yes, sir.

Mr. FREAR. Along the beach there, north of Newport?

Col. STEARNS. Yes, sir.

Mr. FREAR. \$71,000 a mile?

Col. STEARNS. Seventy-one.

Mr. FREAR. I was not aware of that. I have been there.

Col. STEARNS. And those figures, gentlemen, will bear very careful investigation—the cost price—at the costs that were in vogue at the time.

Mr. FREAR. That certainly will bear investigation, for this committee is in a position to put on witnesses who will say that they are building roads to-day, and constantly, that carry large equipment

and large loads, in the neighborhood of \$15,000 a mile; because there is no extra wear and tear on the road running from Newport up the river or running down to that Blodgett tract. You might possibly explain to the committee that there is, and we realize that there are some great cuts and tunnels over on this road running over to Lake Pleasant.

Col. STEARNS. Really, to get an idea of that, gentlemen, you should go over both of those roads down there, if you can.

Mr. FREAR. I think so, with that table of costs.

Mr. FREAR. If your road cost far more than other roads similarly equipped and similarly built and similarly constructed, built at the same time, what would be the inference as to the blame or responsibility, if any existed, for the excess in prices that were incurred?

Col. STEARNS. I do not think you will find the engineers who are informed on the cost of construction during the war willing to admit that there was an excess cost over and above the conditions under which those railroads were built. They were being built rapidly, for a definite reason. They had to be completed in a definite time over difficult country, under the high costs of war conditions.

Mr. FREAR. That is true with every road that was being built at that time, was it not?

Col. STEARNS. I think you will find very few roads under construction at that time. Ours was one of the few roads that was being built in this country during the war.

Mr. FREAR. The Milwaukee Road in its report of 1917, counting its terminals and equipment and everything thrown in, and that is one of the very expensive roads in the country, and it appears in the report of that road that that road carries only \$60,000 a mile in value.

Col. STEARNS. Of course you realize that prices have doubled in a year?

Mr. FREAR. We are confronted with the fact that other roads around there are being built at a nominal price comparatively.

Col. STEARNS. Not at that time.

Mr. FREAR. At that time; yes.

Col. STEARNS. I do not believe you can bring that out.

Mr. FREAR. Reading from this catalogue gotten out by the Spruce Production Corporation, on page 3, it states:

The lumber industry in the States of Oregon and Washington west of the coast range has a possible sawing capacity of approximately 30,000,000 feet per 8-hour day of Douglas fir, spruce, hemlock, and cedar. There is no occasion to add anything to the well-known quality of this western lumber.

That is true, is it—that statement?

Col. STEARN. As far as I know it is, sir.

Mr. FREAR. Your understanding in the reports that you have received that the mills at this time running on an 8-hour day, that is, one-third of their full capacity, can cut 30,000,000 feet of timber per day of Douglas fir, spruce, hemlock, and cedar.

Col. STEARNS. Yes.

Mr. FREAR. That would be cutting it in two and sawing instead of 90—that would be 90,000,000 feet a day if you could run them the entire 24 hours of three shifts, which, of course, would be impracticable. And saying it would be 50,000,000 feet a day, that would be about 7,000,000,000 feet a year running about one-half time, wouldn't it?

Col. STEARNS. I take it that your figures are correct.

Mr. FREAR. And there has been no practical addition to the capacity of the mills of the country within the last two years, has there?

Col. STEARNS. You say there has been none?

Mr. FREAR. No; practically.

Col. STEARNS. That statement is correct.

Mr. FREAR. Reading over on the next page and bottom of this page it says:

The Port Angeles, Wash., mill, is conservatively rated at 400,000 feet, board measure, per 8-hour day. The Toledo, Lincoln County, Oreg., mill, is conservatively rated at 250,000 feet, board measure. The addition of these two mills to the present sawing capacity to the industry, as a whole, will increase the whole production capacity a little over 2 per cent.

Col. STEARNS. Yes.

Mr. FREAR. That is, it is very small compared to the large quantity that could be sawed?

Col. STEARNS. Yes.

Mr. FREAR. Now, that was a statement that was gotten out, as you believe, fairly and honestly?

Col. STEARNS. Yes.

Mr. FREAR. And for the purpose of showing, I assume, that the sale of these mills at this time, which were uncompleted, would not interfere materially with the lumber business, and there would be an opportunity for the purchaser to continue in business.

Col. STEARNS. Primarily to show that any man buying these mills would not be in the position of glutting the market, as it were?

Mr. FREAR. Why did you find it necessary with mills that were capable of sawing 7,000,000,000 feet of timber a year, with 85 miles or more in this State, of building a mill at Pleasant Lake that was to cost about \$1,000,000—this mill, which is the mill that the Seims-Carey Co. had started to construct, and another mill at Port Angeles that was to cost in the neighborhood of \$1,200,000.

Col. STEARNS. No.

Mr. FREAR. I mean with the material that has not been put in. You have got part of the material down at Vancouver. You have a great deal of the machinery down there?

Col. STEARNS. Yes.

Mr. FREAR. I mean that was purposed, to put that in the mill and completing the mill on that cost.

Col. STEARNS. It would not be anything like that.

Mr. FREAR. What was the cost of the mill here at Port Angeles?

Col. STEARNS. The Toledo mill would be less than \$1,000,000.

Mr. FREAR. The Toledo mill will be something like over \$800,000.

Col. STEARNS. About \$976,000, approximately.

Mr. FREAR. We are not getting very far short of \$1,000,000.

Col. STEARNS. I thought you said \$1,200,000.

Mr. FREAR. Yes; I understood that it was \$1,200,000.

Col. STEARNS. Not quite that much. I am speaking about the Toledo mill.

Mr. FREAR. The Toledo mill runs over \$800,000.

Col. STEARNS. Yes.

Mr. FREAR. The Port Angeles mill is what?

Col. STEARNS. \$1,200,000.

Mr. FREAR. Was I right about that?

Col. STEARNS. I understood you to quote that figure concerning the Toledo mill.

Mr. FREAR. Oh no. The Toledo mill is something over \$800,000. I have been there and I know. The Port Angeles mill was to coast what?

Col. STEARNS. Approximately \$1,200,000.

Mr. FREAR. The railroad, according to this contract, running down to Lake Pleasant was only to coast \$2,500,000, as estimated here, which runs up to \$4,000,000. So it is fair to assume, all the conditions being equal, that this mill would run far over the estimates before it had been completed with the machinery all set?

Col. STEARNS. Perhaps so.

Mr. FREAR. Now, with 7,000,000,000 feet sawing capacity for spruce or anything else that you wanted to put in there, what was the object of building this mill at Port Angeles and the mill down there at Lake Pleasant?

Col. STEARNS. If I have the figures to give you on our cut-up plant they ought to pretty nearly answer that question. The increased production capacity of the cut-up plant was quite manifest from the time it started, and its savings through better methods of sawing were without argument. I have a file of letters here showing the difficulties that the factory were having with this stuff that was coming from the outside mills. This is not a criticism of the outside mills. They were not prepared to remanufacture this stuff. It was a new game to everybody and it required a good deal of experimentation and trading of the men, and we were sending those men out to the other mills endeavoring to instruct the sawers in those new mills. There was nothing ever done just like it before, and the result was an increase in our cut-up plant in a few months' time of very nearly 100 per cent increase in the amount of lumber that we got out of the same number of logs. There was also an increase in the mills outside of cutting specific stock, but nothing like the increase that was going on in the cut-up plant. It was so obvious that the centralization of this manufacture was increasing the output so much that to continue the production it was quite obvious that we should continue that method, and in a general way that was the reason for building these other plants. Also there were other reasons.

Mr. FREAR. I understand. But those were people who have been sawing all their lives, and necessarily they had some experience—these men who have a capacity of 7,000,000,000 feet a day.

Col. STEARNS. Nobody will admit it.

Mr. FREAR. Of course, they did not have the advantages of the priorities that were given to the Siems-Carey Co. for the machinery that was being shipped in to their mill for private purposes, for their private contract of theirs. But if they had had the advantage of any priorities and any special machinery that was needed in addition to the machinery, where they had been cutting 7,000,000,000 feet and 317,000,000 feet of spruce in the proceeding here, they would have had, would they not, the same opportunities, because they were practical lumbermen, and they knew as much about the lumber business as those men you were teaching.

Col. STEARNS. Do you realize that we were getting aeroplane lumber from out of 400 mills on this coast, and those efforts of ours

are supplementary thereto; not only that, but we were doing our level best to get these men equipped, and it was only where there was an occasional clash between the equipment that went into one of these mills and the equipment that was put into another mill—the one I am speaking of is one that burned down—that we assumed priority for the Government mill. The loggers and lumbermen of the Northwest will testify to the efforts we made to get this equipment that went into it. In fact, we had one department of our office thrown over to cornering the wire rope in this country so that we could give it out to the men who were in need of it. That is a fact which is absolutely incontrovertible.

Mr. FREAR. With all of these conditions and this wonderful amount of energy which, of course, is behind this construction, according to the information that comes to us, and you had here how many mills to deal with that were cutting up this 7,000,000,000 feet!

Col. STEARNS. Over 400 mills.

Mr. FREAR. So, was it not necessary to give Siems-Carey-Kerbaugh Co. the priorities and give them all the advantages at this time in this cut-up mill that they were to start because they were not loggers and they didn't know a thing about it?

Col. STEARNS. That is a long story.

Mr. FREAR. We are interested in that phase of it, because that is one of the questions which comes before us. Do you know why and how Siems-Carey-Kerbaugh Co. got that contract?

Col. STEARNS. How they got it?

Mr. FREAR. Yes.

Col. STEARNS. No, sir.

Mr. FREAR. Why were they called in? They were not loggers. They knew nothing about that subject, did they?

Col. STEARNS. The contracts were given to men who had a good reputation. Are you talking about logging or milling?

Mr. FREAR. The milling purposes, the \$25,000,000 contract you gave them.

Col. STEARNS. Gen. Disque has the whole correspondence on that and I would much prefer that he answer that. He is prepared to answer that better than I am.

Mr. FREAR. My recollection is of his testimony that he did not know.

Col. STEARNS. He does know.

Mr. FREAR. My recollection of his testimony is that Disque did not know why Kirby was given the contract, isn't that true?

Col. STEARNS. No sir, he does know.

Mr. FREAR. That is interesting.

Col. STEARNS. If there is any man who knows about these various operations it is that man.

Mr. FREAR. I admire the amount of enthusiasm he inspired with others. But I understood that he did not know and that that was his testimony, that he did not know why they were given the contract in preference to others. They were not loggers. That is conceded. They had no reputation, neither of those men, the Siems-Carey-Kerbaugh Co. Col. Kirby joined them and he was a railroad constructor, and they sublet some of their contracts out here for the railroad. They were given two mill sites and they started to build one mill

costing about \$1,000,000 at Lake Pleasant and another at more than \$1,000,000 at Port Angeles—men who knew nothing about this business—to give us aeroplane stock, when we had 400 mills that were manufacturing 317,000,000 feet of spruce stock and 7,000,000,000 feet that they could cut a year if their capacity was taxed to half its limit.

Col. STEARNS. I might add, Mr. Frear, except that I do not think it is quite just to these mill men—the production—that the war started in April, it is probably less than 3,000,000 feet for aeroplane stock going out in November, and there had to be something done very quickly. Our cut-up plant showed splendid results. It was quite difficult. We had to insure continued operation without a let-up. Now, there are lots of other reasons.

Mr. FREAR. Let me suggest one that you fail to mention. You have 30,000 men brought in on the job later. Those were brought in on the Siems-Carey-Kerbaugh contract as well as on all the other contracts, whereas, as the testimony has shown here, when the Secretary of War was asked for a few men to protect the plants they were not had, with the result that some of those plants were having great difficulties with labor trouble. But you brought in 30,000 men and put them in there. That would have the effect, if they were distributed around the mills, of helping them meet this difficult labor situation, instead of bringing them all in for the Siems-Carey-Kerbaugh and other favored individuals. The point is this: The charge is made that this railroad and some other railroads, but this railroad particularly, was built for a purpose at the expiration of the war to be given to other parties; that these mills were constructed with the thought that immediately after the war they were going to be of great value, and, as Siems says in his testimony, after the war was over that was a big question with them. Didn't that question have a large influence in the determination of the policy at that time?

Col. STEARNS. No, sir; it did not. We are men like yourselves. This is our war work.

Mr. FREAR. What did you have to do with it yourself? You did not make a contract. You were not the man that was doing it.

Col. STEARNS. No, sir; but I am associated with men who did.

Mr. FREAR. I have not any question about your understanding of it and about your own position in the matter, but I am trying to bring to your mind that here is the situation. How can you find the conclusion?

Col. STEARNS. You are asking me something that it is not right for me to go on record with an answer, because it was not my policy.

Mr. FREAR. Then that is all right. We will let it go at that. [Reading:]

Products of the Olympic peninsula property, with its mill at Port Angeles, can, when wharf is completed, be loaded on vessels of deepest draught, in safe harbor, alongside mill. Located as it is, on the Chicago, Milwaukee & St. Paul system, likewise a transcontinental railroad, and being at the western limit of Pacific coast terminal rates, this mill can distribute in competition with any mill in the Northwest, and at considerable advantage over a large number of less favorably located mills.

And Mr. Carey, at the conclusion of the war, was in a position to have a large advantage over anybody else, because he was given this

contract. He was the man who was receiving those advantages over his competitors at that time, due to priority and to the troops who were sent in to work for him. How was that carried on, Col. Stearns, the Siems-Carey-Kerbaugh Co. had how many men working for them at that time?

Col. STEARNS. About 4,000 men.

Mr. FREAR. That is on both the spruce and on the railroad?

Col. STEARNS. Yes.

Mr. FREAR. About 4,000 men?

Col. STEARNS. Yes.

Mr. FREAR. How were the troops allotted to these various projects?

Col. STEARNS. They were allotted as needed.

Mr. FREAR. By whom and in what way and how was the request complied with?

Col. STEARNS. Applications would come in from our supervisor on these cost-plus operations for troops—so many for such and such a time—men who could fill the following qualifications, if possible. We had our men all tabulated by qualifications, with the qualification cards filled out, and we had experts there who were endeavoring to pick out men who could fill the duties required.

Mr. FREAR. This was logging work largely.

Col. STEARNS. Largely railroad construction and milling.

Mr. FREAR. The railroad construction they were doing was largely shoveling, was it not?

Col. STEARNS. Some of them were shoveling and some of them were on pick work, and some were experts and some were not. We had about every kind of a man out here from ribbon-counter clerks down to muckers.

Mr. FREAR. You would make an assignment, for instance. Here would come a logging company that would make a request for 100 men; what would be your method of determining whether they had them or not?

Col. STEARNS. We investigated right away. I did this personally. I am responsible for this. We investigated right away into their investigations and found out what airplane spruce or airplane fir that they might be producing; and if what they produced, in my opinion, warranted our helping them, they got them. If it was just about on the border line and was not especially good, but we happened at that time to have a few men selected to put in a few weeks on cost-plus operations, we would sometimes send them over there for a short time and pull them out later if we needed them and put them into the cost-plus operations or primarily for that.

Mr. FREAR. You had complete charge of that?

Col. STEARNS. Yes.

Mr. FREAR. And you determined how many men should go?

Col. STEARNS. Yes.

Mr. FREAR. And the men under you determined their efficiency and what they should receive in money.

Col. STEARNS. Not what they were to receive; that was all stated by bulletin.

Mr. FREAR. But you said that where they measured up to the full capacity then they got the full amount that was on the bulletin; but if they did not, they only received the amount determined by their efficiency.

Col. STEARNS. Yes.

Mr. FREAR. That was the power that you possessed.

Col. STEARNS. Yes.

Mr. FREAR. In both of those activities?

Col. STEARNS. Yes.

Mr. FREAR. Did anyone else interfere with that? Did they permit you to handle that whole matter?

Col. STEARNS. Gen. Disque had confidence in my ability and backed me up to the limit.

Mr. FREAR. And had he had good experience before he took the position here—commercial experience?

Col. STEARNS. It was a more or less new game to everybody. Even the lumbermen who were connected with this thing, it was a new phase of it to them.

Mr. FREAR. What was his experience so far as you know?

Col. STEARNS. I understand he went to the Philippines in the Philippine insurrection and enlisted as a private to get in that affair over there, and did very well and gained his promotion while he was over there.

Mr. FREAR. What year did he go in?

Col. STEARNS. I think it was 1898 or 1899, around in there.

Mr. FREAR. That was after the excitement was all over, wasn't it?

Col. STEARNS. No, sir; the Moro trouble was just starting then. And then he came back and stayed in the service and was promoted up to the grade of captain, and about a year before we entered the war he resigned.

Mr. FREAR. Let us see. He was 11 years as first lieutenant.

Col. STEARNS. Yes. He was not very long a captain.

Mr. FREAR. He was 11 years a first lieutenant.

Col. STEARNS. Yes. That was a day of very slow promotions. I was seven years a second lieutenant myself.

Mr. FREAR. And then go on from that time.

Col. STEARNS. And then he did not see any future there. He was in the Philippines at the time and he was offered the wardenship of the Michigan State prison.

Mr. FREAR. Was not he in Texas at the time?

Col. STEARNS. No, sir; he was in the Philippines at the time. This is a self-sustaining institution, doing, I understand, several million dollars—I think it did three or four million dollars worth of business a year. He accepted that. First he came home on leave to see how he would like it, and he decided he did like it and sent in his resignation.

Mr. FREAR. When was that?

Col. STEARNS. It was about a year before the war, not quite.

Mr. FREAR. What time would that be?

Col. STEARNS. It was in the spring or summer of 1915, I believe, that is my recollection of it. As soon as the war broke out he immediately placed his services at the disposal of the War Department.

Mr. FREAR. That is, you have understood so. When did he go into the service?

Col. STEARNS. I do not know the exact date, but it was shortly after the war broke out.

Mr. FREAR. The war broke out on April 6. Did he go in in May or June or July?

Col. STEARNS. I understand that he asked to be reinstated in his rank in the Regular Army.

Mr. FREAR. Did he ask for something more than what he had in the regular army?

Col. STEARNS. I do not believe so, but perhaps he would be entitled to it. Then he was some months later commissioned as a lieutenant.

Mr. FREAR. You do not know what time he went in there?

Col. STEARNS. Not exactly.

Mr. FREAR. Did he go in as late as August?

Col. STEARNS. You mean the date that he finally got his commission?

Mr. FREAR. Yes.

Col. STEARNS. I think it probably was about that time. It was several months, I know.

Mr. FREAR. In other words, he was at Jackson, Mich., from December, 1916, up to August, 1917?

Col. STEARNS. I understand that as soon as the war broke out that he made an offer of his services right away. Just when those services were accepted I am not prepared to state.

Mr. FREAR. Every one who offered their services and wanted to get in very bad had the opportunity if they were willing to accept what the Government was willing to give them; that is, if they could pass.

Col. STEARNS. He could have enlisted, I suppose.

Mr. FREAR. Well, I know boys close to me at home who went in on the start; they were willing to and did not hesitate. But he waited until August, running a penitentiary.

Col. STEARNS. I do not know, but I think it was probably about that time that he was called. As I understand it, he was waiting to hear from his offer.

Mr. FREAR. Then what happened?

Col. STEARNS. Of course, you understand that he could tell you these things better himself than I could tell you. I understood from several sources that he was under orders along in October, 1917, to go to France, and in fact was booked for the boat that was to leave in about a week.

Mr. FREAR. How long had he been in the service then?

Col. STEARNS. I do not know; not very long; I think just a very short time. They were looking for somebody to send out here. They wanted an Army officer who had some business experience, and Col. Seone, who had known Gen. Disque when he was a lieutenant of the Third Cavalry, recommended Gen. Disque for his position, and Maj. Leadbetter will probably be able to tell you at first-hand about this if you call him. I believe he was present during this conversation. Col. Disque had been picked by Gen. Foulois for work in France. I do not believe from what I have heard that Gen. Foulois wanted to give him up.

Mr. FREAR. Who told you that?

Col. STEARNS. Leadbetter, who, I understand, is at this hearing. I understood he got him because he was needed for this particular requirement, having had some business training and being a soldier.

Mr. FREAR. What was his business training?

Col. STEARNS. The only business training was this here at Michigan.

Mr. FREAR. He was not there a year; he was there eight or nine months.

Col. STEARNS. I should say a year, approximately; it may have been a few months less; I am not positive as to that.

Mr. FREAR. What was his experience there, or do you know?

Col. STEARNS. I know he was the warden of the prison, and that he did a three or four million dollar business.

Mr. FREAR. He handled it acceptably, do I understand?

Col. STEARNS. I was so informed by Mr. Eaman, who was a member of the Board who appointed him.

Mr. FREAR. EAMAN was a member of the Board, and after he appointed Eaman to that position on the Board Eaman appointed him to a position out here as general manager?

Col. STEARNS. Yes, sir. He was a very able man.

Mr. FREAR. He came out here with that experience and that training which altogether occurred there in the Jackson penitentiary, whether it was good, bad, or indifferent, and he came out, and what was he given charge of here?

Col. STEARNS. The first thing he did was to talk with every man that he could get in touch with that he thought might know, in the brief time that he was here, who knew about this situation and the conditions that came up.

Mr. FREAR. Of course he was not a logger; he knew nothing about those matters himself?

Col. STEARNS. No, sir; he considered it a military problem and immediately got in touch with the men who would know the logging and lumber problem, and from that time on he went back and made his recommendations. Then he came out, and it is from that time on—

Mr. FREAR. How long was he out here?

Col. STEARNS. I can not say; that was before I came. I do not think it was more than a week or two; maybe only two or three days.

Mr. FREAR. Was it more than two or three days?

Col. STEARNS. Possibly that was all; I am not sure. I do know he was very hurried.

Mr. FREAR. In view of your statement that he talked to so many men, I wanted to know whether he had a chance to grasp the situation, particularly at that time.

Col. STEARNS. Then he came out and reopened the office in the Yeon Building and we were up against a very difficult proposition. I say "we," because from that time on I went hand in hand with him in endeavoring to help him. Almost every day there was a line of people halfway back to the elevator and we were in a corner room, and they wanted to see us, give advice, or wanted positions, and one thing and another, and there was a tremendous amount of detail. That was just the time we were organizing. We did our organizing work in the day time and spent our evening in consultation with the loggers and lumbermen from all over the Northwest, and there were very few men of promise who were not called in at one time or another, and most of them very often offered to give their advice on different matters that we had to solve, and I might say, gentlemen, that invariably Col. Disque, later Gen. Disque, acted on the advice of those men whom he considered had the experience and the wisdom and grasp of the situation.

Mr. FREAR. In other words, for instance, you were his nearest confidant?

Col. STEARNS. I believe I was.

Mr. FREAR. And you followed him and he recommended you for promotion and you came and took his position, and your influence you feel had some influence on him?

Col. STEARNS. In a personal way, possibly; yes.

Mr. FREAR. Did you recommend him for promotion to the War Department?

Col. STEARNS. No, sir; that would not have been in keeping.

Mr. FREAR. Did you recommend him for a distinguished service medal?

Col. STEARNS. I wrote a letter to Mr. Potter and I called his attention to the fact that lots of men in Washington were receiving distinguished service medals for distinguished service in positions of great responsibility, and that in my opinion none of them that I had read of had done anything that surpassed what Gen. Disque had done.

Mr. FREAR. Well, one thing is true; you were a good friend?

Col. STEARNS. I am, sir; and I am very proud of that friendship, and I am right here to state, gentlemen, that I know him to be clean to the bottom; he is as square and straight a shooter as I ever saw, and I am right here to back him up, and if he has made a mistake I want to share the responsibility with him.

Mr. FREAR. Of course there has been so much that has been volunteered that was not necessary and was not really proper, and I did not intend to go into one or two letters here; but I think possibly it will be illuminating at this time. The Legislature of the State of Michigan made an investigation of Mr. Disque, did they not?

Col. STEARNS. I believe they made an investigation sometime after he left. I am not familiar with those facts.

Mr. FREAR. I have the report here before me.

In their investigation which was held at that time, and this is the official report, the Michigan Journal of the Senate, session of 1919, they said, reading from section 10, page 896—and this is only a part of it:

We regret exceedingly being obliged to report that the discipline of this institution is far from ideal. During the last few years it has steadily gotten worse. This has been the case since Warden Simpson resigned in December 1916, and the responsibility therefor must be placed on those who have acted as wardens since that time. Among other things, we found that prize fighting between inmates was encouraged and approved, card playing and gambling a common practice, and crap games a pastime. Men with bad records both in and out of the prison were named as trustees and allowed unrestricted freedom.

Then they discuss to a large extent what the failure to maintain discipline at the Jackson Penitentiary was due to. Here is another excerpt which may be of interest at this time. Whether it has any application to his subsequent experience the committee does not know; but this was placed in their hands. I read from page 897:

Section 1720 of the C. L. of 1915 prohibits any member of the Board of Control from being directly or indirectly interested in any business carried on in the prisons of the State, or from being interested directly or indirectly in any contract, purchase or sale for or on account of any such prison.

We find that this statute was violated in a number of particulars by Mr. Edward Frensdorf, a member of the board of Jackson Prison, viz:

(a) While a member of said board, he engaged in the binder twine business as a silent partner with John Hawkins of Rollin, Mich., and also with

Frank Bradstreet of Rollin, Mich.; that such business was carried on in the names of the two last mentioned parties, and that the moneys to finance the same were advanced by Mr. Frensdorf, and the profits derived from such transactions were divided equally between the parties forming the partnership.

(b) That said Edward Frensdorf was a stockholder and director of the Western Shoe Co., of Toledo, Ohio, and that said Western Shoe Co. was allowed, with the consent of said Frensdorf, to supply Jackson Prison with quantities of shoes during the year 1918.

(c) That Mr. Frensdorf was a stockholder and director of the Boies State Savings Bank at Hudson, the Hillsdale State Savings Bank at Hillsdale and the Tecumseh State Savings Bank at Tecumseh, and that the board of control of Jackson Prison, while he was a member thereof, borrowed from each of said banks different sums of money, which aggregated in the neighborhood of \$30,000.

Col. STEARNS. I feel confident that that refers probably to the man who followed Col. Disque, because he is a very strict disciplinarian.

Mr. FREAR. He is a man who followed Warden Simpson, and he is a man who at that time is charged with these things.

Col. STEARNS. But you know the investigation of that—it was common knowledge—was brought up sometime after he left because of the man that followed him, and I do not think there is any question of doubt about him.

Mr. FREAR. It says upon the resignation of the warden whom Disque followed. That is what it says in those specific words, so what you say can not be the fact, so far as the finding of this legislative committee goes.

Col. STEARNS. I have seen his troop; it is one of the best troops in the regiment. I have seen his division, and I know how well disciplined it is.

Mr. FREAR. I presume he is all right as a soldier, but I am suggesting this in connection with the eulogy that you insisted upon putting upon the record, and this is the finding of the legislative committee.

Mr. LEA. I believe it is fair to Col. Disque, if his reputation is assaulted, that he should have an opportunity to defend himself, and he should be presented with the charge.

Mr. FREAR. I think he will be called as a witness.

Mr. LEA. I do not think it is a proper way to introduce records, without an opportunity to Col. Disque to reply; and if his character is a matter of investigation by this committee we should go into those matters when he is present.

Mr. FREAR. Col. Disque will have full opportunity before these hearings are concluded to defend himself, and this charge is read in as an official legislative report which was called out not by any word of this committee.

Mr. LEA. It is not binding upon us, and it looks like we are trying to blacken a man's character without giving him a chance to be heard and defend himself, where there is no sufficient motive to justify it.

Mr. FREAR. There is no disposition to do that, but when eulogies are given by his nearest friends which are not called for and not permissible under the circumstances—

Mr. MAGEE. I had understood it was the intention of the committee to call Col. Disque.

Mr. LEA. If he is called he can be given a chance to be confronted with these charges.

Mr. FREAR. Shall we try him for the report of a legislative committee?

Mr. LEA. No, I think it is not proper to put this in the record at all, but if we are going to try him he should be given a chance to defend himself.

Mr. FREAR. He will have a chance to make his own statement in his own way. This is an investigation by a legislative committee that I have referred to, and the present investigation is being held by a congressional committee to ascertain the facts, and presumably the facts were passed upon by the committee of the legislature in an intelligent way and after facts had been placed before them, and I am not sure that there is any great fault to be found. Yet there is a state of affairs that were not quite in line with the suggestion made by the witness in reply to questions we asked him.

Mr. MAGEE. My understanding is that it is the policy of this committee to hear everybody who thinks he has any material facts for our information.

Mr. FREAR. Colonel, what proportion of the spruce that is growing is, for instance, in Clallam County, so far as your understanding or experience goes, or so far as reports came to you, is fit for airplane purposes?

Col. STEARNS. I do not suppose you will find hardly any two acres alike. Up there I believe is the heaviest stand of good spruce, probably, in the two States, and it grows very thick in comparison with the spruce at other places. The Blodgett tract is very good. I am not prepared with cruises, but I can secure the cruises for you. I know in other places where they were considered by cruisers to be fair tracts of spruce, where we were close enough to a road to get them out. We went after spruce when it grew from one to three trees that we could use, to the acre, and we cleaned out pretty well most of the stands of that nature that were within reach of the roads. With these big stands into which we built our railroads we expected to get a great deal more, or we would not have built the roads. So it varies all the way from one tree to 4 acres up to rather heavy stands as shown in Clallam County.

Mr. FREAR. What proportion of the spruce would you say, so far as reports come to you, is airplane timber?

Col. STEARNS. Of all the spruce that is growing?

Mr. FREAR. Of all the spruce that is growing up there. How much spruce which you understand is within the scope of this railway, that is in the immediate neighborhood, can be reached? You have made a statement, I believe, in your book. I do not know what that is based on.

Col. STEARNS. We made a statement of what spruce there was up there; but when you come to estimate the amount of airplane lumber in it, I should prefer to consult our records on that and go into that rather carefully, because that would take a good deal of study to figure out how much airplane timber there is, and even then it would require an approximation.

Mr. FREAR. Would you mark 15 per cent of the trees, or what proportion of the trees would you mark as being fit for airplane stock?

Col. STEARNS. In that locality I would prefer to ask our cruisers. Will you make a note of that, Mr. Walker?

Mr. FREAR. You have not any general knowledge as to that proportion?

Col. STEARNS. I would rather not give any figures on that at this time.

Mr. FREAR. Can you give me this, or who will know: What the average proportion is of trees fit for airplane stock among spruce growing in any particular section of the country?

Col. STEARNS. Of course that varies with where they grow. I am not a logger, but I know that from general information, and a logger will support me, that snarly low land spruce is not good for airplane purposes. The big citrous spruce on the high lands back of the coast are the ones that we pick, and that grows, as you must have seen already, in clumps. There is the big size up in Clallam County and down in Michigan. There are other places along the coast where it may be found in patches, up in Merrill & Ring's operations, and around the various operations there were small patches of it, but it is pretty well scattered.

Mr. FREAR. It is in large patches when it runs into 17,000,000 feet to the square mile there in the Merrill & Ring land, as I called your attention to, according to your own map. That is a large growth.

Col. STEARNS. That is all right, but you must remember that the figures on these maps relate to spruce, not airplane spruce, and there is lots of difference.

Mr. FREAR. I understand.

Col. STEARNS. Now, that was one of the things, of course, that we had to learn when we came out here. People would show us where there was a tremendous amount of spruce and we would investigate and find that there might not be any airplane spruce at all and that it would be absolutely worthless to us.

Mr. FREAR. Did you examine any of this spruce?

Col. STEARNS. Personally?

Mr. FREAR. Yes.

Col. STEARNS. No. I sent experts.

Mr. FREAR. Did you send experts who understood the airplane business?

Col. STEARNS. Not the airplane business, but they understood specifications that were required to make airplane stock and what trees would probably furnish those specifications.

Mr. FREAR. Who did you send, cruisers?

Col. STEARNS. Cruisers and lumber experts, men who were familiar with the business; mostly cruisers, of course.

Mr. FREAR. Did any of these cruisers go over the Merrill & Ring lands and the Goodyear lands to find out whether their spruce was good?

Col. STEARNS. I personally did not send them.

Mr. FREAR. The forester's statement is that there is a great deal of spruce there.

Col. STEARNS. I know about that; we got splendid spruce from the Merrill & Ring land.

Mr. FREAR. They are large operators and cut considerable spruce for you, did they not?

Col. STEARNS. Yes.

Mr. FREAR. Was that true of the Goodyear people?

Col. STEARNS. Yes; they got some good spruce.

Mr. FREAR. So good spruce is up in that immediate section?

Col. STEARNS. Yes. You do not get the idea, gentlemen, that was conveyed in any of the papers.

Mr. FREAR. We have not read any of the papers, because we have been out in the country.

Col. STEARNS. You probably will hear this: We are a bureau, a go-between between the industry and the Government and are glad to help the industry and help the Government. In addition to that we had one department, which we call our Government operations department, that handled cost-plus operations. They were to supplement what the industry did, and all our efforts were to help the industry just as much as to help them, and, as I say, only one of our departments—

Mr. FREAR. That was the purpose of your organization. Of course this idea of continually saying what their wishes were and what you were trying to do is superfluous. We will assume you were trying to carry out the purposes you were sent here for, and it is not necessary to continually bring that in. Whether or not you did will be shown by results.

Col. STEARNS. Yes, sir.

Mr. FREAR. And that is the thing to test it by?

Col. STEARNS. Yes, sir.

Mr. FREAR. And these questions resolve themselves down to what you did or what your efforts were and what you proposed to do?

Col. STEARNS. Yes.

Mr. FREAR. You were getting out enough airplane stock to meet all requisitions, were you not? The question is whether or not you gave sufficient support to all these plants. You were giving the support largely to Siems-Carey-Kerbaugh and people like that who were favored loggers or manufacturers?

Col. STEARNS. No, sir.

Mr. FREAR. Why did you give them 4,000 men for this work, to carry on their work—

Col. STEARNS. You must realize that the time is going to come when the loggers and the industry as a whole are going to run out of the fir within the reach of their railroads. That time was coming very soon; in fact, I think I will be able to show you by a chart very soon what the production would have been, based upon the estimates made by loggers themselves of what their production would be in the coming year. Those figures will show that in December and January following the armistice there was going to be a drop in production, and it was absolutely essential that we have to make ready to carry that production on.

Mr. FREAR. Why was the drop coming in the production?

Col. STEARNS. Because, as I said before, the various loggers had logged the available spruce within the reach of their railroads. We were asking them for more; we were urging them to move their railroads and asking them to make every possible effort to do that. But there were some limitations to asking a man to do that; you could not ask him to pick his railroad up and move it to a distant place unless there was a sufficient stand of spruce to justify it. We gave them every help we could to stimulate production.

Mr. FREAR. Did you say to loggers like Goodyear and the Merrill & Ring people, "Gentlemen, we will give you a cost-plus contract sufficient to build a railway out to this timber. We will commandeer the timber as we have the power to do under the statutes?" Did you not go to a stranger who is not a logger and who has had no previous experience in spruce production and give them a \$6,000,000 advance on their spruce contract and also give them a cost plus contract for building a railway? What was the cause of the difference between that treatment of this company and the people who live here?

Col. STEARNS. We helped the Merrill & Ring railway; we gave them men to build the railroad; we sent them up to build it. I do not know just what we did to the Goodyear people, but I am sure that if they had a situation similar to that of the Merrill & Ring people we would help them. We were helping everybody.

Mr. FREAR. But the Goodyear people were up within 15 miles of this spruce?

Col. STEARNS. I am not familiar with all the dealings of the Goodyear people.

Mr. FREAR. Clallam Bay is in the immediate neighborhood, and the Hoko River that I referred to?

Col. STEARNS. I am not familiar with that. I say that whoever went in there had to satisfy the Government that they would get out what was absolutely necessary, and give a sufficient bond to insure their good faith. The Siems-Carey people did that. It is possible that other people might have done it. The thing had to be done and done immediately. There is no more that I care to say, because I do not know all of the facts. Gen. Disque will give you the rest of the facts when he comes.

Mr. FREAR. All right. That is a situation that confronts the committee in regard to the conditions there. How many miles of logging railway would it have taken to have logged this amount of spruce that was called for under the contract made with the Siems Carey-Kerbaugh Co., do you know?

Col. STEARNS. I would rather you would ask our engineers that; they can give you more satisfaction on that than I can.

Mr. FREAR. Here is just one question that occurs to me: I note in one of your statements that you have several hundred automobiles, and 100 or thereabouts are for passengers. What is becoming of those; are you selling those off now?

Col. STEARNS. Yes, sir. They were practically all Fords. There were a few second-hand machines of other makes, and two or three larger cars; but nearly all were Fords, and they have nearly all been sold. I think there are possibly 12 yet that have not been sold.

Mr. FREAR. You are using those?

Col. STEARNS. Yes, sir. Those are very valuable to us, because our troops are scattered widely at these different camps, and we had to have our squadron commanders and medical officers get from group to group every day, and keep in touch with the men, and we did it through the use of the Ford machines.

Mr. FREAR. You had the men scattered all through Washington and Oregon?

Col. STEARNS. Yes, sir. I have a very interesting map here. [Witness produces map.] That map shows the division into districts, the

red line and the little dots show the localities in which the troops were stationed. The names of the districts are written in. Those were the military districts.

Mr. FREAR. That is, making it clear in the record, this is a map of a portion of the spruce activities in Washington and Oregon?

Col. STEARNS. Yes, sir.

Mr. FREAR. And that is divided into districts?

Col. STEARNS. Yes, sir.

Mr. FREAR. How many districts? There is the Puget Sound district.

Col. STEARNS. Yes, sir; and Grays Harbor district.

Mr. FREAR. Grays Harbor district, and the Vancouver district.

Col. STEARNS. Vancouver district.

Mr. FREAR. And the Clatsop district.

Col. STEARNS. And then the Columbia River district.

Mr. FREAR. And the Coos Bay district and Yaquina Bay district. That brings to my mind the question of the Quinault reservation and other reservations. Did you do anything with those reservations: did you try to get in?

Col. STEARNS. We tried to get in on that, but we didn't get there before the war stopped; we didn't get to logging before the war stopped.

Mr. FREAR. Why couldn't you have done so?

Col. STEARNS. We had to get the railroads to the end of the lake to pull out the stuff. The railroad was nearly there when the war was over. It was our plan to log into the lake and raft out.

Mr. FREAR. The authority was given under the statute?

Col. STEARNS. Yes. As I say, we had a railroad built almost there. It was our plan to log into the lake and then raft on the lake, and then load out on the railroad at the end. The railroad was not completed.

Mr. FREAR. The forestry report is here that only one permit was ever asked for or was issued, as far as I can gather, for spruce and Douglas fir in all the forestry lands. I do not know whether I understand this right. This is under date of August 5, 1919, to Hon. Albert Johnson, House of Representatives, who is the Representative for the Grays Harbor district. It says: "The forester has issued one free-use permit to the War Department under the special provision of the agricultural appropriation act for the fiscal year 1919. The permit issued was for 6,000,000 feet of mixed species, chiefly spruce and Douglas fir." It states that the amount actually taken under this permit was approximately 3,752,000 feet board measure. Of course, there are very large spruce holdings in the Quenilt and other reservations?

Col. STEARN. Yes, sir.

Mr. FREAR. There was some trouble with the Polson Co. down there at Grays Harbor, in getting out the spruce, wasn't there, in getting a railroad in?

Col. STEARNS. There wasn't any trouble. There wasn't any trouble. We were pushing on the road as rapidly as we could. We had an able supervisor there, and we expected to have that road ready very soon to receive the logs.

Mr. FREAR. When was that railroad started?

Col. STEARNS. I do not know the exact date.

Mr. FREAR. How many months were spent in building the road?

Col. STEARNS. Approximately, I should say, seven or eight months.

I am not sure of the exact dates.

Mr. FREAR. What was the length of the road?

Col. STEARNS. I do not know.

Mr. FREAR. Very short, wasn't it, comparatively?

Col. STEARNS. Comparatively. I am not prepared to say on that;

I can get that date, Mr. Frear.

Mr. FREAR. With the cost-plus contract you were able to build 36 miles up with the Seims-Carey, Kerbaugh Co. at a cost of nearly \$4,000,000?

Col. STEARNS. I know that road didn't go as fast as the other.

Mr. FREAR. It went very slow, didn't it?

Col. STEARNS. And it required a change of supervisors up there, but I do not think they had any trouble.

Mr. FREAR. Why were the supervisors changed?

Col. STEARNS. We were not getting quick enough results from the other one. We thought a new one would better the situation.

Mr. FREAR. The trouble was with your own officials, is that it?

Col. STEARNS. I do not think so.

Mr. FREAR. The supervisor—who do you mean by the supervisor?

Col. STEARNS. You see, we had a supervisor representing the Government with each cost-plus contract.

Mr. FREAR. I understand.

Col. STEARNS. And he was to push and get the work done and look after the advantage of the Government.

Mr. FREAR. And after, you say six or seven months after that, you felt that he was not doing very much in getting this Polson road up into the Queniult?

Col. STEARNS. We changed long before that, and then things quickened up; things hastened up. It was a pretty big operation, Mr. Frear, and every once in a while there would be a slow up somewhere and we would get to it as quick as we could and straighten it up.

Mr. FREAR. I appreciate that. The only question is whether or not there was sufficient interest taken in these other places, whether he had the help to which he was entitled?

Col. STEARNS. He was a large operator, one of the largest operators on the coast.

Mr. FREAR. He was one of the largest operators on the coast?

Col. STEARNS. Yes.

Mr. FREAR. There were others who came in without any previous experience and they were given every advantage?

Col. STEARNS. They were given, I am quite positive, every help they needed.

Mr. FREAR. You mean the Polson people?

Col. STEARNS. I have not heard anything to the contrary. If that is not the case I would like to know it so I can investigate it.

Mr. FREAR. It appeared in the Ray report; there was considerable complaint that appeared in the Ray report.

Col. STEARNS. About that?

Mr. FREAR. Yes; about the Polson contract and about the operations down there, up to the Queniult Reservation. Aren't you familiar with that?

Col. STEARNS. I am not familiar with all of it. That was handled confidentially. I saw parts of it in print, but I didn't have it all in print.

Mr. FREAR. I didn't know; I supposed maybe you had that. I think it would be a good thing to put this map in the record as an exhibit. This is their division map.

Col. STEARNS. It shows the location of the troops.

Mr. LEA. Yes; I think it would be a good idea.

Mr. FREAR. I offer that in evidence as one of the exhibits.

[Map received in evidence and marked "Exhibit F."]

Mr. LEA. In the early part of your testimony you made a statement that the English had paid \$14,000,000 toward bearing the expense of this operation?

Col. STEARNS. Yes, sir.

Mr. LEA. Do you know what the original agreement was with the Allies in reference to apportioning the expense of the spruce production operations?

Col. STEARNS. They were going to bear the expense in accordance with the amount, the proportion of lumber received by them, and this settlement with the English the other day for \$14,000,000 was on the proportion of lumber that they received, and it sets a precedent for the settlements with the other countries. There is no doubt that they will pay on the same basis. That being the case, the Allies will pay approximately \$30,000,000 of these expenditures that we have made out here. In addition to that, I might say, gentlemen, that we expect to salvage much of our property and hope and expect to get at least eight to ten million dollars out of it. That being the case, at an outside figure, I do not believe that there will come out of the Treasury of the United States for our operations more than \$12,000,000. That covers all operations. Thirty million dollars, or approximately \$30,000,000 will be paid by the Allies. We will get salvage from the stuff that we have on hand. So I think \$12,000,000 will cover all that will come out of the Treasury of the United States for our expenditures. And in lieu of the cry that has gone up of the wastage of Government funds, I would like to impress that point upon you quite thoroughly.

Mr. LEA. Now, about what is the approximate expense of the whole operation?

Col. STEARNS. It will be very close to \$50,000,000 expended, and approximately \$30,000,000 of that by the Allies, and then the salvaging will probably account for \$10,000,000 of what is left.

Mr. LEA. What countries besides England agreed to pay a portion of this expense?

Col. STEARNS. The Italians and the French.

Mr. LEA. And on what basis was the responsibility of each country determined?

Col. STEARNS. They were to bear the expense according to the—they were to take these debentures, and that means that they were to make settlement according to the amount of airplane lumber that they were taking. Now, the three of them combined were taking two—

thirds of the airplane lumber we produced. Only one-third was for our own airplane program, two-thirds were for the Allies.

Mr. LEA. Now, in arranging the proportion of responsibility, a country like Italy, of course, will not pay as much as England?

Col. STEARNS. No, they paid the proportion of what airplane lumber they received. Now, the Italians did not get as much airplane lumber as the French, so they did not pay as much.

Mr. LEA. Was the original agreement based upon what they were to receive, or a percentage basis?

Col. STEARNS. A percentage basis.

Mr. LEA. Was the final settlement with England in accordance with the original contract, or with a subsequent contract?

Col. STEARNS. With the subsequent understanding that they were to take these debentures in proportion to the spruce they utilized. That was the way the debentures were to be divided up. Then, in order to simplify the collection, we turned the debentures over to the Air Service, and the Air Service collected from the Allies and made the settlement with them instead of the Allies making a settlement with us for part of the lumber and with the Air Service for the part that they had formerly gotten out. They made all their settlements with the Air Service.

Mr. LEA. Can you produce the figures showing the percentages furnished these respective nations?

Col. STEARNS. Yes; 34 per cent approximately went to the United States; 31 per cent went to Great Britain; 24 per cent went to France, and 10 per cent to Italy. Therefore, the United States, 34; Great Britain, 31; France, 24; Italy, 10.

Mr. LEA. On what basis is the salvage value apportioned?

Col. STEARNS. The salvage value was apportioned the same way, the same way the expenses were apportioned, and at an estimated salvage basis. We will exceed our estimate considerably, I am glad to say.

Mr. LEA. That is, the amount of money you will receive will exceed your estimate of the salvage value?

Col. STEARNS. Yes; I am quite sure it will. Just how much I do not know.

Mr. LEA. How did you determine the salvage values so far as England was concerned?

Col. STEARNS. We made an estimate of all we thought at that time we could save. Right after the signing of the armistice we made an estimate of what we thought we might receive from our properties, and we will, I am quite confident, exceed that.

Mr. LEA. Do you know on what sum the settlement with England was based?

Col. STEARNS. I do not know right off hand what that salvage basis was, but we can obtain that.

Mr. LEA. Can you get that here?

Col. STEARNS. Yes, sir. That was a pretty difficult thing to estimate, because the bids that we got were very low.

Mr. LEA. As I understand it, you have made a settlement with England?

Col. STEARNS. We have made a settlement with England, and it will follow that the settlement with the other countries will be approximately the same.

Mr. LEA. Well, we might return to this after the figures are presented. What amount of salvage has already been received from the sale of salvaged property?

Col. STEARNS. To July 31, our total sales aggregated \$2,750,965.34.

Mr. LEA. And of what property—what property was included in those amounts?

Col. STEARNS. That is equipment that had been concentrated at Vancouver Barracks.

Mr. LEA. Mostly machinery and tools?

Col. STEARNS. Mostly machinery, logging equipment, contracting equipment for railroad construction, miscellaneous supplies, clothing and commissaries, and miscellaneous equipment in general.

Mr. LEA. Was all of it secondhand, or was part of it new?

Col. STEARNS. Part of it was new, part of it was secondhand, and part of it was practically junk.

Mr. LEA. About what percentage of its original cost did you recover on the salvage sales?

Col. STEARNS. I will try and get you that figure definitely. I think that figure is declining every day, in view of the fact that our standard equipment is being sold out more every day and we are getting down to more junk and secondhand stuff that is less desirable, and which necessitates a lower valuation. About a month ago it was something like 74 per cent. I think when we close out we will be doing very well if it is 50 cents on the dollar.

Mr. LEA. Are you in a position to give the actual figures on that?

Col. STEARNS. I have a chart on my desk that shows the percentage, prepared from time to time, showing the ratio percentage of our sales to our cost. It ran, when the stuff was new and standard, to 82 per cent, and is decreasing all the time, until now it is in the neighborhood, I think, of 55 per cent.

Mr. LEA. Fifty-five per cent of its original value?

Col. STEARNS. Yes. So that the average I estimate when we get through will be approximately around 50 cents on the dollar. And I hope it will be that.

Mr. LEA. Now, have you the information that I called for a little while ago?

Col. STEARNS. Yes. The total liability will be \$48,527,871.48.

Mr. LEA. That is estimated?

Col. STEARNS. And that the estimated salvage would be \$3,908,000, approximately \$4,000,000.

Mr. LEA. On what date was that estimate made?

Col. STEARNS. We will pretty near reach that very soon. That was just based on an estimate of what we might expect as of February 15. Now, that is quite a long time ago, just as the stuff was coming in from the woods, when it was pretty well scattered, but they wanted to settle promptly with the British and the British wanted to settle quickly with them, and so we had to make that estimate at that time, although we told them at that time that it was purely an estimate. It was about as good an estimate as we could make at that time.

Mr. LEA. The English settled in full upon an estimate?

Col. STEARNS. Yes, sir.

Mr. LEA. Of \$3,000,000.

Col. STEARNS. Yes, sir.

Mr. LEA. And when these other countries come to settle you will probably have to settle on the basis of what actually is realized from the sale of salvaged property?

Col. STEARNS. I think we will probably settle on the same basis, because it would not be fair to the English to settle on any other basis, and I think the chances are that they will all settle on the same basis and that we will get the benefit of any salvage value that might be over and above what our estimate is. I can not, of course, foresee what they will do down there, but in all probability I should think they would do it that way. The comptroller can do that. Mr. Campbell probably can give you more definite information.

Mr. LEA. Have you any table of figures similar to this, that is, more up to date?

Col. STEARNS. That is the estimate that we sent to them on which they made their settlement. You see, that was the approximate balance sheet on which they made settlement at that time. They wanted figures then, and we were not in a position to give them anything but approximate figures, but that is what we gave them, the approximate figures on which the Allies settled.

Mr. LEA. Well, on the other hand, wouldn't it be an injustice to Italy, for instance, to settle on a basis of \$3,000,000, when as a matter of fact, the United States would receive say \$6,000,000?

Col. STEARNS. Well, perhaps so. They are settling that down there. They know that situation there. I think the Italians know that. Mr. Walker, the treasurer, has been talking with the comptroller, and it is his opinion that they will probably wait and find out more accurately what the salvage is. When you put him on the stand he will—he has been in touch with Washington, and can give you more definite information than I can on that, because this, you understand, is what they are doing there, not what we do. Maj. Campbell, our comptroller, was the head of the finance department in Washington, of the Air Service, and he will probably know how they will handle that.

Mr. LEA. So this was a joint operation of the Allies, but the management of it was left to the United States?

Col. STEARNS. Yes.

Mr. LEA. Now, in reference to the payment of soldiers civilian wages, I wish you would state further the reasons for doing that?

Col. STEARNS. It was quite obvious that to have given soldiers to private operators to work in their mills or in their camps, where those operators were under no expense, that they would have been making an undue profit. There had to be some way of getting around that. It would not have been right to have given that money back to the United States, for the United States would then have been selling the services of its soldiers. There was only one thing to do, and that was to have the man get the recompense for the work he was doing. We did not like to do it, because those men were soldiers, but there was no other way to get around that situation. There were other reasons that were quite apparent. It would not have been fair to a man in the woods to have been cutting a tree down and getting \$30 a month, and another man right along side of him getting \$5

or \$6 a day. It would have been labor competition. The operators would have been trying to get soldier labor, naturally, or at least it is reasonable to suppose that the laboring man would have so considered the situation and the chances are that there would have been a cry of labor competition raised immediately. It was absolutely essential, and one of our biggest problems out here to stabilize labor conditions, and after that thing was hatched over pro and con it was finally decided that there wasn't any other way to do it, in spite of the fact that it was not a pleasant thing to have to do. And nobody has yet suggested an alternative for that situation that to my mind is anywhere near satisfactory, knowing the situation as I do.

Mr. LEA. Have you any figures to show the number of soldiers engaged in the operation at different dates?

Col. STEARNS. I can give you whatever figures that you need on that. I have two different dates picked out just at random. On May 25 we had in the division 12,673 men.

Mr. LEA. This table gives the number of soldiers at two different dates?

Col. STEARNS. Yes; one on November 1 showing a total of 28,121, and one May 25 showing a total of 12,673, and in a general way how those men were used.

Mr. LEA. Both months referring to the year 1918?

Col. STEARNS. Both months referring to the year 1918. Those men just started to go in in December, 1917.

Mr. LEA. Have you the totals for any other month handy?

Col. STEARNS. We kept a weekly bulletin showing the strength of the organization weekly, and I can have copies of that made or get you the number of men from time to time.

Mr. LEA. Now, will you give me the number of men in the woods on the 25th of May, 1918?

Col. STEARNS. On the 25th of May, 1918, there were 8,139 men in the field. There were 2,504 men at Vancouver, in the Medical Corps, at headquarters, in the First Divisional Guard Regiment, in the transportation unit, in the casual detachment, and in the medical detachment.

Mr. LEA. Now how many were in the woods on the 1st of November, 1918?

Col. STEARNS. On the 1st of November, 1918, there were in the woods 18,000 men, and there were at the cut-up plant 4,312; disbursing quartermaster, 9; Quartermaster's Department, 46; Portland headquarters, 333; Medical Department, 607; and at the cantonment, 4,818. Of these, 1,588 were the guard, 340 were transportation, 2,763 general fatigue, 99 Medical Department, men on duty with the Loyal Legion, 28; making a total of 28,121. I might add that Vancouver Barracks was our depot from which our men were coming and going as they were sent from one job to another.

Mr. LEA. What was the largest number of soldiers engaged in the operations at any one time?

Col. STEARNS. That figure there.

Mr. LEA. On November 1?

Col. STEARNS. On November 1.

Mr. LEA. What was the largest number of these 28,000 men who were under the Seims-Carey-Kerbaugh Co.?

Col. STEARNS. Approximately 4,000 men.

Mr. LEA. And in whose employment were the other men, so far as logging operations were concerned?

Col. STEARNS. They were with cost-plus operators in the woods, and with private operators in the woods. I can get you the exact figures of how that distribution was made. The spruce operators had the first call.

Mr. LEA. The spruce operators outside of the cost-plus contractors.

Col. STEARNS. Outside of the cost-plus contracts.

Mr. LEA. Now, at the present time, have you a complete statement of the cost of the railroad, that is, of No. 1?

Col. STEARNS. I expect to get that to-night, sir.

Mr. LEA. I will not ask anything further about that at present. You haven't the data as to the items on which Siems-Carey-Kerbaugh were allowed cost plus at the time of settlement, or up to this time?

Col. STEARNS. No.

Mr. LEA. You will get that, will you?

Col. STEARNS. I will get that.

Mr. LEA. Was there any other transcontinental railroad on this peninsula, other than the Milwaukee & St. Paul?

Col. STEARNS. No, sir.

Mr. LEA. And, therefore, it is true, isn't it, that any railroad operation that went there, to have a connection with the East, would be a contributor to that particular railroad?

Col. STEARNS. Yes, sir.

Mr. LEA. And it meant that the United States must refrain from developing this country, or else it would make a contribution to the Milwaukee?

Col. STEARNS. Yes, sir.

Mr. LEA. Now, do you think that the fact that the Milwaukee would be benefited, was any reason why the United States should refrain from developing this spruce?

Col. STEARNS. I say make contribution to the Milwaukee. I qualify that by stating: Probably indirectly, not directly.

Mr. LEA. Well, they had to pay the Milwaukee to get their freight out of there, didn't they, if it went by rail?

Col. STEARNS. Either that or, if satisfactory traffic arrangements could not have been made, it was our intention to construct that line down to the coast and put our logs right into the water; and that line, as you probably saw, or have noted, has been surveyed with that intention.

Mr. LEA. But that would involve water transportation to some other railroad off the peninsula, wouldn't it?

Col. STEARNS. Yes.

Mr. LEA. The only possible railroad with which the United States could connect upon that peninsula, for transcontinental traffic, was the Milwaukee.

Col. STEARNS. Yes.

Mr. LEA. Were you there at the time that investigations were in process, in reference to the construction of this railroad?

Col. STEARNS. Yes; I was here, but my duties didn't bring me into connection with the details in any way, either of the formation of that contract or its execution.

Mr. LEA. If you know, what engineers were advising upon the route?

Col. STEARNS. I know that a disinterested engineer was called in; that a letter was written by Gen. Disque to the Union Pacific—vice president of the Union Pacific—requesting the services of a disinterested engineer, to advise him. A man by the name of Mr. Roberts was selected by the vice president of the Union Pacific for that duty. Mr. Roberts was then sent by Gen. Disque to the peninsula to make an investigation and give his opinion of what he considered the proper route for our purpose. That opinion was given—and we can either get Mr. Roberts's report or have him appear before the committee—in which he advises—unbiasedly advises—

Mr. FREAR. What is that word?

Col. STEARNS. Unbiasedly advises that we take the route that was taken through the Lyre River canyon.

Mr. LEA. Who were on the board of directors of the Spruce Production Corporation at that time?

Col. STEARNS. That was before the corporation was formed.

Mr. LEA. That was under the Spruce Production Division?

Col. STEARNS. That was under the Spruce Production Division.

Mr. LEA. Do you know when negotiations, or, rather, when the consideration of the construction of this railroad, first began?

Col. STEARNS. Gen. Disque talked to me about that railroad, as far back as December or January, 1917 or 1918, and discussed the matter with several people when I was in his office.

It was always his idea that if it became necessary to get more spruce, that we ought to go to the place where the spruce was, and there was no place that our cruises showed where there was as much spruce, of the kind that we wanted, as right there in Clallum County, and it was away back in early days of the division that he had made up his mind that if any railroad construction were needed to get this out, that there was the place that he would go to it. I talked with him about it, and others have talked with him about it. It was no new scheme, and when our requirements became increased, and as soon as weather conditions permitted, he went right ahead with the arrangements for that construction.

Mr. LEA. What was the source of information on which the Spruce Production Corporation and the Spruce Division acted, in determining the location of suitable spruce?

Col. STEARNS. We got all the county cruisers together. we got all the private cruisers together that we could get hold of, the maps showing the cruises; we consulted with operators who were in a position to know—loggers. And then, having by such means gotten a general idea, we then sent our own investigators out to find out the facts, just what was there and what was not there, before the final step was taken.

Mr. LEA. And what was the duty of those investigators?

Col. STEARNS. Those investigators were to go out and cruise the timber and make a report on the availability of the timber for airplane purposes, the amount there for airplane purposes, and collected all the necessary information pertaining to it that we should know.

Mr. LEA. Can you give a statement of the facts that were presented to the Spruce Production Corporation, or the Spruce Production Di-

vision, in the spring of 1918, which led to the determination for this railway expansion for the production of spruce.

Col. STEARNS. I only know that—

Mr. LEA. What I mean: I would like to get the estimates. You have already stated the source of the estimates, as I understand. Now, I would like to get the estimates and the information as to the availability of spruce that was already accessible—that is, accessible in existing operations.

Col. STEARNS. Yes.

Mr. LEA. If you have those figures and haven't them here now—

Col. STEARNS. I haven't them here, but I will endeavor to get them for you.

Mr. LEA. Well, perhaps it would be better to take it up in the morning, or will you have them in the morning?

Col. STEARNS. No, sir; it will take some time to compile those figures?

Mr. LEA. I would like it if we could get those when we go down to Portland, then.

Col. STEARNS. There is this much that was very evident, from a cursory knowledge of those figures, that there would be a great drop off of production in the industry the last part of 1918 and the first part of 1919.

Mr. LEA. Well, I suppose we had better go into that at the same time. What is the name of this engineer of the Union Pacific?

Col. STEARNS. The name was Roberts. His full name I am not familiar with. I think it was Roberts, though.

Mr. LEA. Do you know anything about his particular work or qualifications?

Col. STEARNS. I can get that information for you.

Mr. LEA. Well, very well. Now, to what extent was Col. or Gen. Disque surrounded by men of practical experience, to what extent did he have their cooperation and advice in conducting the spruce operations?

Col. STEARNS. He made no move of importance to the industry without—of a large nature, no important policy of a large nature was decided on without very careful consultation with their influential men in the industry, not one, not two, but dozens. Night after night we were down at the office from eleven until twelve o'clock in conference with loggers and millmen of the Northwest, from Washington and from Oregon, all over, trying to get all they could give us on these different questions and it was really they who gave the information on which these policies were shaped, and it was from their opinions in general that these policies were drawn; taking those who, as I say, had the best grasp of the situation, of the problems that confronted us, the immediate requirements, and of the difficulties at hand, weighing all those things carefully; those men who did that were the men whose advice in the particular case the general followed, and he was a very successful reader of men.

Mr. LEA. Now, in a little more specific way, what were the functions of the directors of the Spruce Production Corporation, in practice, what were their functions?

Col. STEARNS. The directors of the corporation only came into office during the latter few months. Those same men were his ad-

visers in an official capacity, however, before the corporation was formed. The Aircraft Board in Washington appointed an advisory committee, in the nature of a subsidiary Aircraft Board on the Pacific coast. Those men were such men as Mr. Ladd, president of the Ladd & Tilton Bank in Portland, Mr. Yeon—no, not that—he was later. Mr. Benson, of Portland, and Mr. Mark Reed, a Washington logger, of Shelton, Wash. Those three men acted as his official advisors. In addition to that—

Mr. LEA. How many were there on that advisory committee?

Col. STEARNS. Those three.

Mr. LEA. Yes.

Col. STEARNS. That was the official advisory committee. Then, in addition to that, when he wanted to discuss matters vital to the loggers and pertaining to logging, he called in the loggers from Oregon and from Washington, and when it was a matter of prices—a matter of prices for lumber, he called in mill men from Oregon and from Washington. I can give you a number of names of men who were then in his office, and it will include most of the successful men of the industry who have been there one time or another in consultation with him, some of these men time after time. I guess that covers the question.

Mr. LEA. As to those men on the advisory commission, who I understand acted with Col. Disque up to the time the Spruce Production Corporation—

Col. STEARNS. Yes.

Mr. LEA. Mr. Ladd, who is he, what is his business?

Col. STEARNS. Mr. Ladd is president of Ladd & Tilton bank, or was president of the Ladd & Tilton bank in Portland at the time he was acting as adviser.

Mr. LEA. And who is Mr. Benson?

Col. STEARNS. Mr. Benson is a very well-known man in Portland, owner of the Benson Hotel, and very prominent in the history of Portland. He is one of their most prominent citizens.

Mr. LEA. What is his business?

Col. STEARNS. He now has retired. No; that is, the old man—this is his son; I would like to have you correct that. I was thinking of old Mr. Benson when I spoke. His son, as I understand—he was not adviser—is carrying on the estate of his father now, and was an experienced logger before his present occupation—an active logger of great experience.

Mr. Reed has large lumber holdings—lumber operations, I should say—in Washington, and is one of the ablest loggers, I suppose, in this State; that is the general impression that I have heard concerning him.

Mr. LEA. Is he a mill operator also?

Col. STEARNS. I say operator; he is a lumber operator.

Mr. LEA. You mean both logging and milling?

Col. STEARNS. A mill operator. I am not positive about whether he is in the mill business or not.

Mr. LEA. When the Spruce Production Corporation was organized, who were chosen as its board of directors?

Col. STEARNS. The advisory board, men who had been on the official advisory board were chosen as the board of directors; and, in

addition, Mr. Donovan, of Bloedel-Donovan Lumber Co., of Bellingham, Wash., and Mr. Bevis, representative of the Loyal Legion organization; Gen. Disque, and myself.

Mr. LEA. Only five?

Col. STEARNS. No; the three advisers, Donovan, Bevis, Gen. Disque, and myself.

Mr. LEA. When did Mr. Yeon become a member?

Col. STEARNS. Yeon?

Mr. LEA. Yes, Yeon.

Col. STEARNS. Mr. Yeon was not a director. He was supervisor of the cost-plus operations in Clatsop district.

Mr. LEA. What experience had he had in the lumber business before he became connected with these operations?

Col. STEARNS. He worked his way from the very bottom up to his present status; and he is considered a very influential man in Portland; built the Yeon building; successful; has been a logger all his life.

Mr. LEA. In what country did he have charge?

Col. STEARNS. In Clatsop district.

Mr. LEA. Who is Mr. Donovan?

Col. STEARNS. Mr. Donovan is a member of the firm of Bloedel-Donovan Lumber Co. They have large holdings in the State of Washington. He actively manages the mills of that plant at Bellingham, Wash.

Mr. LEA. Is that firm a logger as well as a miller?

Col. STEARNS. Yes; and logging, they have logging operations, as well as milling operations.

Mr. LEA. How long has he been engaged in the lumber industry?

Col. STEARNS. He has been engaged in the lumber industry ever since he came out here. He was a civil engineer on the Northern Pacific Railroad and settled out here—I don't know exactly. I think it was somewhere probably 20 or more years ago.

Mr. LEA. How old a man is he?

Col. STEARNS. Mr. Donovan is a man, I should say, about 58.

Mr. LEA. What was the business of Mr. Bevis?

Col. STEARNS. Mr. Bevis was a logger, not an owner. He was selected to be on the board of directors because it was our desire to have the Loyal Legion organization, which was one of our strongest agents in stabilizing the lumber industry—desired to have that organization represented in the division, connecting the two in that way. After the signing of the armistice, then he left.

Mr. LEA. Was the board of directors changed after that any—the membership changed?

Col. STEARNS. After the armistice?

Mr. LEA. After the board was organized.

Col. STEARNS. It has been changed from time to time.

Mr. LEA. Did it change any before the armistice?

Col. STEARNS. Not before the armistice. Yes, it changed in one respect: I left the board when my duties were getting very arduous in the military end of it, and turned over my position as director to Maj. Eamen, who came out and was gradually taking over the duties at the head of the production end of the office.

Mr. LEA. Do you remember about what date that was?

Col. STEARNS. That was probably about just before the armistice was signed, about a month before.

Mr. LEA. Are you operating under the same character of organization to-day, a board of directors?

Col. STEARNS. No—yes.

Mr. LEA. You have a board still?

Col. STEARNS. We still have a board of directors. We have changed our organization within the corporation, but our board of directors is still operating.

Mr. LEA. Generally speaking, what has been the change?

Col. STEARNS. The change has been to cut down all—to consolidate all the departments that we could into one, so that one experienced man could take over the work of winding up the various other departments.

Mr. LEA. In effect reducing the organization?

Col. STEARNS. In effect reducing the organization as much as possible.

Mr. LEA. Who are the members on the board at the present time?

Col. STEARNS. The board at the present time are Mr. Donovan—or Mr. Ladd, Mr. Donovan, Mr. Grammer.

Mr. LEA. What is that name?

Col. STEARNS. Grammer, G-r-a-m-m-e-r. Mr. Griggs, Mr. Eastman.

Mr. LEA. How do you spell his name?

Col. STEARNS. E-a-s-t-m-a-n. Capt. Massey—not Mr. Massey, he had left the service—and myself.

Mr. LEA. And who was Mr. Grammer and what was his former business?

Col. STEARNS. Mr. Grammer is a very successful logger in Washington, in charge of the Admiralty Logging Co. When we came out here, he was president of the West Coast Lumbermen's Association, and he has been a constant adviser and help throughout all our operations.

Mr. LEA. What was Mr. Griggs's occupation?

Col. STEARNS. Mr. Griggs was president of the St. Paul & Tacoma Lumber Co., one of the most successful and larger milling operations.

Mr. LEA. Where is that company operating?

Col. STEARNS. At Tocomo, Wash.

Mr. LEA. Mr. Eastman, what was his business before?

Col. STEARNS. Mr. Eastman is president of the Western Cooperaage Co., a company that logs—makes its product out of the raw material. An experienced logger.

Mr. LEA. And Capt. Massey, who was he?

Col. STEARNS. Capt. Massey is my assistant and acts in that capacity.

Mr. LEA. Was he in the Regular Army before he was in the—

Col. STEARNS. No.

Mr. LEA. A temporary officer, was he?

Col. STEARNS. He was a temporary officer.

Mr. LEA. And what was his business before coming into the service?

Col. STEARNS. He was in the Army, but not as a commissioned officer. I should correct myself. He worked his way up.

Mr. LEA. In the Regular Army?

Col. STEARNS. In the Regular Army.

Mr. LEA. Now, you referred to the Loyal Legion. I wish you would briefly tell us about the organization of that legion, and why, and what, if anything, was accomplished by it.

Col. STEARNS. It was very obvious, when we first came out here, that one of the first problems to be solved was to stabilize the labor conditions in the industry. The outcome of that was the organization of this Loyal Legion society. It was a patriotic society for the purpose of preaching Americanism to the men in the woods. After several meetings with different men and different operators who had views on the subject, and getting their idea, we started this society, and had a telegram of approval from Secretary Baker. The outcome was that it took like wildfire in the woods, and in three or four months' time we had something like 80,000 members on the west coast and probably 50,000 or thereabouts in the inland empire—that is, across the mountains. We went in there at the request of the War Department, because the effort had been so successful on the west coast. The total membership of that organization during the war was approximately 130,000 members. After its organization there were no strikes; sabotage, which had been rampant, gradually died out; the I. W. W. element was practically stamped out; it laid dormant in one or two camps and, in fact, in those it was finally practically blotted out. It was a very interesting and quite a remarkable success.

Mr. LEA. At what date was that accomplished?

Col. STEARNS. The effects of it were felt within a month after—it is pretty soon to put it that much—I would say within six weeks—from a month to two months after the supervisor—after the organizers went out. We took young officers, some score or more of them, assigned them to districts to organize the men in the camps and mills, into this society, sent them out, tried to pick out men who were good talkers and had a good presence and could inspire enthusiasm. They were very successful, with the results I have stated. In addition to that, we sent sanitation officers throughout the whole Northwest, to inspect the logging camps and mills and see where we could improve living conditions under which the men were working. There was so much talk of the living conditions. Reports that we have indicate that great improvement was made in those living conditions. Also, that organization became the medium through which Gen. Disque spoke to the laboring men of the lumber industry. The operators, that is, the members of the West Coast Lumbermen's Association, unanimously agreed to turn over the conditions of work, wages, and hours of work, to the decision of Gen. Disque. The employees did the same thing, in the convention held in Portland and the convention held in Spokane. It was on that very unanimous desire on the part of the employers and the employees that the action concerning the wages and hours and conditions was gone into. We had the support of the entire industry in all such matters.

(Thereupon, at 5.30 o'clock p. m., the committee adjourned until tomorrow, Thursday, August 21, 1919, at 10 o'clock a. m.)

SUBCOMMITTEE No. 1 (AVIATION)
OF THE SELECT COMMITTEE ON
EXPENDITURES IN THE WAR DEPARTMENT,
HOUSE OF REPRESENTATIVES,
Thursday, August 21, 1919.

The subcommittee met at 10 o'clock a. m. in the court room of the United States district court, Seattle, Wash., Hon. James A. Frear (chairman), presiding.

Mr. FREAR. Mr. Lea, do you wish to ask any more questions?

Mr. LEA. I have some questions I would like to ask at this time.

TESTIMONY OF LIEUT. COL. CUTHBERT POWELL STEARNS, UNITED STATES ARMY—Continued.

Mr. LEA. Colonel, you stated that there was a correction you desired to make in your testimony with reference to soldiers' pay. What is that?

Col. STEARNS. I am afraid I led the committee to believe that one dollar was the pay that was allowed to men in the woods until their efficiency proved that they could earn more. That should be corrected. They were allowed sufficient pay from the operator to pay for all their expenses, and they were under unusual expense in the woods for clothing and food; and it was only in a very few cases that the man did not get full pay. I do not think there were more than possibly 50 men at any one time who were not getting the going wage for their work in the woods.

Mr. LEA. What was the amount allowed for board?

Col. STEARNS. A little over \$7 a week, I think it was; \$7.35 a week approximately.

Mr. LEA. And what was the unusual expense on account of clothing?

Col. STEARNS. They had to provide their own clothing out of the pay that they got from the operators just in the same way that the civilian employees had to supply their own clothing; that is, mackinaws, loggers' boots, what they call tin pants, necessary heavy underwear, and all of those things put them at a great deal of expense.

Mr. LEA. Was there any specific sum allowed to cover that additional expense?

Col. STEARNS. Not by the Government. That was one of the necessities of having extra compensation.

Mr. LEA. Was there any specific sum allowed to cover these additional expenses?

Col. STEARNS. From the Government?

Mr. LEA. Yes.

Col. STEARNS. No.

Mr. LEA. Was there any sum agreed on that the contractor was to pay?

Col. STEARNS. Only a sufficient sum to cover what expense a man was up against.

Mr. LEA. Based on actual expenses?

Col. STEARNS. Yes. There was no definite figure stated.

Mr. LEA. In reference to the question of paying soldiers civilian wages, there was shipping carried on here at Seattle, was there not shipbuilding?

Col. STEARNS. Yes sir.

Mr. LEA. For the Government?

Col. STEARNS. Yes sir.

Mr. LEA. Do you know of any reason why a man in the United States Army engaged in civilian work in producing lumber was not entitled to pay as much as a civilian engaged in shipbuilding?

Col. STEARNS. Of course everybody felt that where they did military duty, and if that duty was commercial in nature and they came in contact with nobody but soldiers, they were entitled to soldier pay only; but where they were in competition with civilian labor it was not fair either to the Government to allow them to work free of charge to the operator, nor was it fair to anybody concerned to have a dual system of wages for the same work, one for civilians, and one for soldiers.

Mr. LEA. You mentioned the fact that you desired to make a correction in your testimony of yesterday with reference to the percentage of spruce produced on the Pacific Coast. What is the correction you wish to make?

Col. STEARNS. The chairman of the committee made an estimate of 6 per cent for the amount of spruce produced on the Pacific coast out of all timber, and I concurred in that, roughly.

Mr. FREAR. Just a moment. I was quoting from Nelson's report.

Col. STEARNS. You said it was approximately 6 per cent.

Mr. FREAR. The report says that. I was not making the estimate myself. I know nothing about it.

Col. STEARNS. I say, you made an approximate estimate from those figures.

Mr. FREAR. I made a statement as to what was in the report; I did not make the estimate.

Mr. LEA. Well, what is the fact; that is all I want to know?

Col. STEARNS. I concurred, but on figuring it out I find the percentage should be 4.7 per cent.

Mr. LEA. Returning to the man associated with Col. Disque, who had charge of milling operations under the Spruce Production Corporation, who was he?

Col. STEARNS. Mr. Breece, later Col. Breece, from Charleston, W. Va., an operator of a good many sawmills in the East and South, a man of large operating experience.

Mr. LEA. And who had charge of fir production?

Col. STEARNS. Fir production was under the charge of Mr. Griggs, the president of the St. Paul & Tacoma Lumber Co., later Maj. Griggs, a well-known mill man of the Northwest.

Mr. LEA. He was engaged in operating mills?

Col. STEARNS. Engaged in operating, and president of the St. Paul & Tacoma Lumber Co. of Tacoma, Wash.

Mr. LEA. And who was head of logging operations?

Col. STEARNS. The logging operations were under Mr. Watson Eastman.

Mr. LEA. What were his qualifications?

Col. STEARNS. He was president and manager of the Western Cooperage Co., a concern which manufactured cooperage material from the raw product.

Mr. LEA. Where?

Col. STEARNS. In Oregon. They did their own logging for that purpose. He was an experienced logger.

Mr. LEA. Do you know how many years he had been engaged in the logging business?

Col. STEARNS. I think certainly over 20 years, because he had worked his way up in the business.

Mr. LEA. Who was the engineer of the Spruce Production?

Col. STEARNS. The chief engineer was Mr. Welch, later Maj. Welch.

Mr. LEA. What were his qualifications?

Col. STEARNS. He is chief engineer on the Palisades Park Commission, New York City, a very large park which is being thrown up across the river from Manhattan Island. He before taking that position had been engineer on a large number of railroads throughout the country. He is a man of very wide railroad construction experience. The other engineer in our organization associated with him was Mr. G. B. Harrington. He was supervising engineer on the Southern Pacific Railway and I understand had he remained there, I have been unofficially informed, would probably have been their chief engineer, as he was in direct line for promotion.

Mr. LEA. How many years' experience had he had?

Col. STEARNS. He had long been in the railroad engineering business, certainly over 20 years' experience in that work.

Mr. LEA. Who had charge of the erection and operation of the cut-up plant at Vancouver?

Col. STEARNS. Mitchell had charge of the design and the erection.

Mr. LEA. What were his qualifications?

Col. STEARNS. He, for most of his life, has been a designer of mills on the Pacific coast and is a machinery expert and also a mill operator. The consensus of opinion among the men consulted on that appointment was that we could not have secured a more able man for our purposes.

Mr. FREAR. I do not object to a little latitude, but I do object to a witness saying what the consensus of opinion is. That is an answer that is not possible to be presented before any committee or anyone else; it is an improper answer, and I simply suggest to the witness to try to confine himself to facts.

Mr. LEA. A great deal of latitude has been indulged in in this examination.

Mr. FREAR. But it has been entirely with this witness all the way through suggesting things that are not within the scope of the examination. He speaks of a consensus of opinion, but he does not know the consensus of opinion. It is impossible for him or anyone else to know that. I suggest that he confine himself to the questions and we will get along better.

Mr. LEA. Who had charge of cost-plus operations at Yaquina?

Col. STEARNS. Mr. Howard Holland.

Mr. LEA. What was his official position?

Col. STEARNS. He was supervisor of operations in the Yaquina district.

Mr. LEA. What was his experience and his qualifications?

Col. STEARNS. He was an experienced and able logger, a successful logger, in Oregon.

Mr. LEA. Who was supervisor of the Clallam County district?

Col. STEARNS. Mr. Mott Sawyer, later Maj. Mott Sawyer.

Mr. LEA. I think we mentioned him yesterday.

Col. STEARNS. Yes, sir.

Mr. LEA. And who was in charge of cost-plus operations at Grays Harbor?

Col. STEARNS. Mr. Thomas Hutchinson, a successful logger in that district, and later Mr. Grammer, the head of the Admiralty Logging Co., a successful logger in Washington, and president of the West Coast Lumbermen's Association at the time we came to the coast.

Mr. LEA. I do not know if I understood you yesterday, but I wish you would briefly state how you determined whether or not you would assign soldiers to any contractor or operator who requested them?

Col. STEARNS. We based all such assignments on the actual production figures of airplane lumber or logs produced from the camps or mills making requests for soldiers.

Mr. LEA. Suppose they had not so far produced anything, suppose he was a new man in the work, how would you determine that?

Col. STEARNS. Then we sent a representative to investigate their camp and find out exactly the nature of the timber, or to their mill, as the case might be, to get the facts necessary to show that it would be for the benefit of the Government.

Mr. LEA. Now, is there any foundation for the suggestion that partiality was shown to the Siems-Carey-Kerbaugh Co.?

Col. STEARNS. None, sir.

Mr. LEA. And what, if any, difference was there in the assignment of labor to them and other cost-plus contractors?

Col. STEARNS. Only that where the demand was for men needed for immediate increased production, we gave preference to that place.

Mr. LEA. How many shifts did the men work in the construction of the Lake Crescent Railroad?

Col. STEARNS. There were at times three shifts working up there.

Mr. LEA. And what was the lighting system for the night work?

Col. STEARNS. They had a lighting system for night work in order to hasten the construction.

Mr. LEA. What was the general nature of the lighting system; was it electricity?

Col. STEARNS. Yes, electricity.

Mr. LEA. And how was the light generated?

Col. STEARNS. I am not familiar with that.

Mr. LEA. Do you know of any instance in which any responsible officer of the Government, or any contractor, or any responsible officer of any contractor has engaged in any graft or deception or fraud or crime by which the finances of the Government have been injured?

Col. STEARNS. I know absolutely of no such things.

Mr. LEA. I believe that is all.

Mr. MAGEE. Colonel, I would like to ask you some questions. How many of these cost-plus contracts were there?

Col. STEARNS. There were four cost-plus contracts.

Mr. MAGEE. Will you name them?

Col. STEARNS. They were the Siems-Carey contracts, and I class that as one—

Mr. MAGEE. That is, you class the spruce contract and the railroad contract as one.

Col. STEARNS. I mean—you asked me as to the contracts or the contractors?

Mr. MAGEE. The cost-plus contracts.

Col. STEARNS. There were some subsidiary contracts to each one of the main ones; for instance, those you saw yesterday.

Mr. MAGEE. They were between the main contractor and the subsidiary contractor.

Col. STEARNS. Yes sir.

Mr. MAGEE. What I mean is the cost-plus contracts entered into by the Government.

Col. STEARNS. There were those two Siems-Carey contracts—

Mr. MAGEE. Which you call one.

Col. STEARNS. Which we consider one. Then there was a contract with the Grant Smith-Porter Bros.; a contract with the Warren Spruce Co., and a contract with the Airplane Spruce Co.

Mr. MAGEE. How many million feet of spruce were produced under the Siems-Carey cost-plus contract?

Col. STEARNS. They were cutting logs—

Mr. MAGEE. I just want to know approximately what they produced.

Col. STEARNS. There were none produced on the spruce contracts.

Mr. MAGEE. That covers it. There was not any produced under the railroad contract because they had not completed the railroad!

Col. STEARNS. No.

Mr. MAGEE. So there was none under that.

Col. STEARNS. No, sir.

Mr. MAGEE. How much was produced under the Grant Smith-Porter Bros. contract?

Col. STEARNS. I will have to get you that; I can get those figures, and I will make a note of it and get that for you.

Mr. MAGEE. Can you give it approximately?

Col. STEARNS. No, sir.

Mr. MAGEE. How much was produced under the Warren Spruce cost-plus contract?

Col. STEARNS. I can not give you those figures, but I can get them all exactly for you.

Mr. MAGEE. And what was the other one?

Col. STEARNS. The Airplane Spruce Co.

Mr. MAGEE. The Airplane Spruce Co. contract. How many million feet of spruce were produced here in the States of Washington and Oregon during the period of the war?

Col. STEARNS. You mean airplane spruce shipped out?

Mr. MAGEE. Yes.

Col. STEARNS. There was 143,000,000 feet, in round numbers, of spruce shipped out from these two States and paid for through our office.

Mr. MAGEE. That is the total?

Col. STEARNS. That is the total.

Mr. MAGEE. Can you not furnish me the figures showing what proportion of that spruce was furnished under these three cost-plus contracts?

Col. STEARNS. I can have that done.

Mr. MAGEE. Can you not give it to me now?

Col. STEARNS. No, sir.

Mr. MAGEE. In other words, can you give me any idea of the proportion of that 143,000,000 of spruce lumber that was produced under those three cost-plus contracts?

Col. STEARNS. If you mean the lumber—

Mr. MAGEE. No, I do not mean that at all; I mean exactly what I say, and I am only asking for information. But what I am getting at is who produced the spruce here in the States of Washington and Oregon which was furnished for airplane purposes. That covers it.

Col. STEARNS. The loggers and the millmen and the cost-plus operators and the Government cut-up plants all did their part. We can give you the exact figures on any one of those.

Mr. MAGEE. I am not questioning your good faith, but you have talked so much about efficiency of the operations of the Government, and it appears that they did not have any agent or officer but who was extremely efficient and with a reputation of many years' standing, and I do not question anything of that sort; but what I want to get at is how much spruce did they produce under these three cost-plus contracts?

Col. STEARNS. That, of course, you understand, was only one small department of our office, but I will get you those figures. Our office was primarily to carry on the industry.

Mr. MAGEE. All I want is an answer to the question; was it 1 per cent of the 143,000,000 feet of spruce lumber, or was it more, that was produced under these cost-plus contracts?

Col. STEARNS. I will get you those figures. It was not a great deal of lumber that was gotten out through Government contracts.

Mr. MAGEE. I regard that as a very important part of this investigation, and I think I will defer further examination until you can answer the question. Was the spruce produced by the loggers, or was it produced under these wonderful cost-plus contracts?

Col. STEARNS. It was produced by the loggers.

Mr. MAGEE. I want to see who got results; that is all I am interested in.

Col. STEARNS. It was the loggers who got practically all of it; only a small amount by the cost-plus.

Mr. MAGEE. The amount gotten out under these Government contracts would be 1 per cent of the 143,000,000?

Col. STEARNS. Considerably more than that.

Mr. MAGEE. How much more? I will take your estimate, and then you can get the exact figures.

Col. STEARNS. We will get that for you.

Mr. MAGEE. Would it be 5 per cent?

Col. STEARNS. I would rather get the exact figures.

Mr. MAGEE. Well, I will ask you a few more questions while Mr. Walker is figuring that up. Now, you stated yesterday, I think, that only one railroad company was operating in this locality.

Col. STEARNS. No, sir; I said on the Peninsular.

Mr. MAGEE. Transcontinental lines. Now, where is the Northern Pacific; isn't that down there; doesn't that get into the Grays Harbor country?

Col. STEARNS. I said on the Peninsular.

Mr. MAGEE. What do you call the Peninsular?

Col. STEARNS. That part between the southern extremity of Puget Sound and an east and west line drawn at that point.

Mr. MAGEE. You don't mean to say that the Northern Pacific was not near the scene of operations and available for an extension of its road if it had been determined on?

Col. STEARNS. No; I do not mean to say that.

Mr. MAGEE. Their road was here and could have been extended and utilized if that policy had been determined on?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, I understood you to say that the policies were determined by the lumbermen here; is that right?

Col. STEARNS. I would not say they were determined; I would say they were determined after advising with those lumbermen, and in most cases the advice of those men was taken.

Mr. MAGEE. I mean to say, were the policies determined upon on the recommendation of men here who knew the business, lumbermen, as you call them?

Col. STEARNS. They were.

Mr. MAGEE. Did they determine that this railroad should be built from Disque Junction, now called Disque Junction, on to Lake Crescent and Lake Pleasant?

Col. STEARNS. I have no doubt that there was some—

Mr. MAGEE. No; if you know, answer yes or no; if you do not know, say so.

Col. STEARNS. I do not know the facts of that decision.

Mr. MAGEE. Well, that was one of the important decisions in the matter, was it not?

Col. STEARNS. Yes, sir. I stated before that that would not come into my part of the work.

Mr. MAGEE. Answer it yes or no; that was one of the important things to be decided, was it not?

Col. STEARNS. It was.

Mr. MAGEE. Do you say now that the lumbermen here decided that question of policy?

Col. STEARNS. I tell you I do not know definitely on that particular point.

Mr. MAGEE. If you do not, that answers that. So you would eliminate the most important proposition in your statement?

Col. STEARNS. No, sir.

Mr. MAGEE. That the policies were determined by the lumbermen here?

Col. STEARNS. I did not make the statement that they were determined by the lumbermen here. I said the policies were decided after consultation with the lumbermen.

Mr. MAGEE. I understood you to say yesterday, and to reaffirm this morning, that you did take their recommendations. Now, will you tell me who did determine upon the location of this railroad from Lake Crescent to Lake Pleasant?

Col. STEARNS. The final decision in that matter rested with head of the division, Gen. Disque.

Mr. MAGEE. So Gen. Disque determined that?

Col. STEARNS. On the advice of his advisors, yes.

Mr. MAGEE. Answer it yes or no, if you know.

Col. STEARNS. Yes, on the advice of his advisors.

Mr. MAGEE. So there is not any question or equivocation about the fact that Gen. Disque determined where this railroad should go?

Col. STEARNS. Absolutely none, sir.

Mr. MAGEE. Now, the junction down there where it joins the St. Paul is now called what?

Col. STEARNS. Disque Junction.

Mr. MAGEE. When was it changed?

Col. STEARNS. I do not know that it ever had any other name.

Mr. MAGEE. Do you know whether it did or not? I do not know, but we were told down there that prior to that time the name was Whiskey Creek. Do you know anything about that—Whiskey Junction or Whiskey Creek?

Col. STEARNS. I understand that there is a creek that for a number of years was named Whiskey Creek.

Mr. MAGEE. No; that the name was changed from that to Disque; do you know anything about that?

Col. STEARNS. I do not know about that, sir.

Mr. MAGEE. Now, you stated something about some adjustment having been made with England?

Col. STEARNS. Yes, sir.

Mr. MAGEE. When was that adjustment made?

Col. STEARNS. Our comptroller just received word about it, about the settlement having been made—he received word a few days ago.

Mr. MAGEE. You do not know when it was?

Col. STEARNS. The exact date of it—it must have taken place within the last month, but I can not given you the exact date.

Mr. MAGEE. You do not know whether any money was paid?

Col. STEARNS. Yes, sir; I know that he was informed that \$14,000,-000 had been paid.

Mr. MAGEE. Had been agreed upon or paid?

Col. STEARNS. Had been paid.

Mr. MAGEE. Now, what was that for?

Col. STEARNS. That was for the lumber purchased from this country, the spruce division and corporation, by Britain.

Mr. MAGEE. That was all it was, that England was paying for the lumber?

Col. STEARNS. Exactly.

Mr. MAGEE. Spruce lumber?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Which she had gotten from the United States Government?

Col. STEARNS. Yes, sir.

Mr. MAGEE. In payment of a debt?

Col. STEARNS. Yes, sir.

Mr. MAGEE. That is all that amounted to, wasn't it?

Col. STEARNS. Well, in our mind it amounts to more than that.

Mr. MAGEE. I say, that was the transaction?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, you can not tell, of course, I assume, how much our Government will lose in operations here?

Col. STEARNS. Very closely, sir. I can get it, I think, within \$2,000,000.

Mr. MAGEE. Do you think you can tell now?

Col. STEARNS. Yes, sir; I think the United States will not be cut of pocket more, on the outside, than \$12,000,000 for our operations here.

Mr. MAGEE. That is what you think about it?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Of course you can not tell until the operations are finally wound up?

Col. STEARNS. I can not tell to the cent, but our figures give us very close guidance right now, sir.

Mr. MAGEE. Well, in forming this conclusion are you controlled or is your judgment in any way aided by this salvage statement that was brought up yesterday?

Col. STEARNS. I do not know to what you refer. [Witness examines salvage statement.] That is the basis on which the British Government settled, and it is probable that the French and Italians will settle on the same basis.

Mr. MAGEE. Who prepared this statement?

Col. STEARNS. The comptroller of the corporation, I believe, sir.

Mr. MAGEE. I will introduce this exhibit in evidence.

[Document received in evidence and marked "Stearns Exhibit G."]

Mr. MAGEE. Did you go over this salvage statement?

Col. STEARNS. I have looked it over, sir.

Mr. MAGEE. Did you O. K. it?

Col. STEARNS. No, sir.

Mr. MAGEE. Do you know anything about it?

Col. STEARNS. I know it is a statement presented me from the comptroller of our corporation.

Mr. MAGEE. Have you examined it?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Do the statements or estimates contained therein meet with your approval?

Col. STEARNS. Yes, sir.

Mr. MAGEE. So that you know what the document says?

Col. STEARNS. Yes, sir.

Mr. MAGEE. And you approved the same?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, you stated yesterday, as I recall, that in the sale by the Government of these railroad properties you anticipated that you would get reproduction cost?

Col. STEARNS. Approximately reproduction cost, I said, sir.

Mr. MAGEE. Now, I call your attention to Schedule A, property account, in this statement. It says of railroad construction, under cost, \$8,742,100.20; under estimated salvage value, \$750,000!

Col. STEARNS. Let me see that, please, sir? [Witness examines document.] What line were you reading, please, Mr. Magee?

Mr. MAGEE. Right here. [Indicating.] The tenth item.

Col. STEARNS. Yes. Now, I call your attention, sir, to the fact---

Mr. MAGEE. I am asking you about that statement.

Col. STEARNS. Yes, sir; and I am intending to answer it, sir.

Mr. MAGEE. Well, that is right, is it?

Col. STEARNS. What do you mean "right."

Mr. MAGEE. Why put the salvage at \$750,000?

Col. STEARNS. It was right at the date on which that thing was written, sir, which was February 15.

Mr. MAGEE. It was right at that time?

Col. STEARNS. Yes, sir.

Mr. MAGEE. So at that time—

Col. STEARNS. That is as close—that is a fair estimate, and that is all that is—is an estimate.

Mr. MAGEE. At that time, February, 1919, you estimated that you would get a salvage of \$750,000 out of cost of railroad construction of nearly \$9,000,000, that is right, is it?

Col. STEARNS. Let me see those figures again, please.

Mr. MAGEE. I think the figures are probably what your judgment was at the time. [Witness examines document.] Perhaps it was good judgment; I am not questioning the judgment.

Col. STEARNS. In answer to that I would like to state the following: That this estimate—

Mr. MAGEE. I am only asking you—

Col. STEARNS (continuing). Was made at the time the British Government was asking us and was pressing up for a settlement. We repeatedly stated that our equipment was not contemplated sufficiently to give a proper estimate.

Mr. MAGEE. Colonel, I will just interrupt you; I do not assume that you would want to play unfair with England or that this Government would when you consider all that England did and suffered in this war. I do not know how you feel about it, but so far as I feel, as a Member of Congress of the United States, I would be disposed to deal fairly with England, just as fairly with England as I would with this country, so if you want to go into it, all right, I have no objections, but I am simply giving you a note of warning on that.

Col. STEARNS. I want to explain to you this statement. You have asked me for my explanation and I desire to give it. This is an estimate based—

Mr. MAGEE. Go into it as deep as you please.

Col. STEARNS. This is an estimate based on the information that we had at that time. It was impossible in those early days to even arrive at anything like a close estimate of what our property or equipment was going to bring. We furnished that estimate under protest, and in making it we stated—we put the figures low so that we would be on the safe side in making our settlement, so that the United States would not be unnecessarily out of pocket. The facts were known to the British, as I understand it, when those settlements were made, that they were purely estimates based on a very meagre knowledge of what we might possibly get from our equipment. That is all I have to say on that point, sir.

Mr. MAGEE. So you were entirely willing to put less than a 10 per cent estimate in salvage value as against England?

Col. STEARNS. No, I wouldn't say that. I have given my answer on that point, sir.

Mr. MAGEE. And the adjustment which you have mentioned here of \$14,000,000 was based in part upon this estimated salvage value?

Col. STEARNS. It was, sir, so I understand.

Mr. MAGEE. If eventually you should derive a greater salvage value you would expect, I assume, that this adjustment which you claim has been made would be revised along the lines of right and equity.

Col. STEARNS. The facts will be presented——

Mr. MAGEE. I am asking you what you would——

Col. STEARNS. I have nothing to do with that, sir. That is handled entirely by the Finance Division in Washington.

Mr. MAGEE. That would not prick your conscience any?

Col. STEARNS. The facts are absolutely on the paper, Mr. Magee. and there is nothing in any way being hidden in that matter.

Mr. MAGEE. I am trying to get at your ideas, whether you would be willing, in dealing with England, an associated power, to effect an adjustment upon this salvage value of less than 10 per cent?

Col. STEARNS. I should like England to know all the facts in this matter.

Mr. MAGEE. And then you would want to deal with England——

Col. STEARNS. I am not dealing with England, Mr. Magee.

Mr. MAGEE. I am asking you what you would want to do after you had made known the facts, what you would want our Government to do in dealing with an associated power and ally.

Col. STEARNS. If you ask my personal opinion, that is it. I would like to have them deal fairly with all our Allies.

Mr. MAGEE. And you would deal just as fairly and equitably with England as you would with France or Italy?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Certainly. Now, there is a further item here, Colonel. Construction Seims-Carey, H. S. Kerbaugh Corporation saw mill. cost, \$2,395,345.14; estimated salvage value, \$239,000.

Col. STEARNS. You have heard my statements on those salvage values, Mr. Magee.

Mr. FREAR. Ask him for it again.

Mr. MAGEE. Your statement as to this would be the same as to the other?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Less than 10 per cent, I assume, is a good ways from reproduction cost?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, not having gotten out but very little spruce under these governmental contracts, I will ask you what you were anticipating getting out?

Col. STEARNS. We were anticipating getting out sufficient, with what the industry was getting out, to make our whole production 30,000,000 feet a month, as was required by the Director of Aircraft Production.

Mr. MAGEE. Well, that would be practically 1,000,000 feet a day.

Col. STEARNS. Yes, sir.

Mr. MAGEE. In other words, when you got under steam you would get out more in six days than the Government, assisted by the lumbermen here in Washington and Oregon got out during the period of a year and seven months of war?

Col. STEARNS. I do not understand your question. As I say——

Mr. MAGEE. Just wait a minute. I wish you would listen to my question, and if you can not answer it say so. But while I want to

be most fair with you, Colonel, and I intend to be, yet I do not want to waste time, and I only want the questions answered that I am asking for information, and answered yes or no.

Col. STEARNS. I am very desirous of answering your questions correctly, Mr. Magee.

Mr. MAGEE. I will give you abundant time for any explanations, but while I am not familiar with these propositions as you are, yet a few minutes ago, as I recall it, you stated the total amount of spruce gotten out was 173,000,000 feet?

Col. STEARNS. One hundred and forty three million feet.

Mr. MAGEE. I am too high myself. Then I will put it five days, if you got out 30,000,000 feet a day, as I figure it, five days would be 150,000,000 feet. That is what is in my mind. Now, I will ask you this question: You were anticipating when you got under steam getting out more spruce in five days than the Government and all these mills here, and experienced lumbermen on the Pacific coast had gotten out during the period that the United States was in the war?

Mr. LEA. You mean five months instead of five days. You said "days," you mean "months."

Mr. MAGEE. Yes.

Col. STEARNS. If you mean "we" got out, I say no.

Mr. MAGEE. I didn't say "we."

Col. STEARNS. I beg your pardon, you said "you."

Mr. MAGEE. I said the Government and all the lumbermen here, and the mills on the Pacific coast.

Col. STEARNS. That is what—

Mr. MAGEE. One hundred and forty-three million feet.

Col. STEARNS. That same machinery was to continue in this new program.

Mr. MAGEE. Will you answer that question?

Col. STEARNS. That is what I am endeavoring to do, sir.

Mr. MAGEE. Now, you were anticipating getting out more in five days than had been produced here in all the time that we were in the war?

Col. STEARNS. No; no, sir. We were anticipating getting out 5,000,000 feet in five days, and when I say "we," I mean the whole industry.

Mr. MAGEE. In five months, I mean to say, instead of five days. Of course, five months.

Col. STEARNS. If you mean the cost plus contractors were, I say no. If you mean the whole industry, and the contractors were, I say that was our program.

Mr. MAGEE. That is what I mean.

Col. STEARNS. That is my answer.

Mr. MAGEE. You were anticipating getting out a total—

Col. STEARNS. Yes, sir.

Mr. MAGEE. In less than five months more—

Col. STEARNS. Than we had gotten out in the previous year.

Mr. MAGEE (continuing). Than was produced here during the—

Col. STEARNS. Previous year; yes, sir.

Mr. MAGEE. During the time we were in the war. That was a year and seven months.

Col. STEARNS. Yes, sir. I had better modify that a little, because we did not come here until November, and that 143,000,000 commences in November and runs around until the following November.

Mr. MAGEE. How much would that affect?

Col. STEARNS. One hundred and forty-three million in that year, and it was our plan to get more than that in the next 5 months.

Mr. MAGEE. Now, you built the mill up here at Port Angeles to take care of the lumber which you would get from the Lake Pleasant locality?

Col. STEARNS. Yes, sir.

Mr. MAGEE. And that was a permanent mill?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, I notice in the introduction of the pamphlet put out by the United States Spruce Production Corporation this statement, to wit:

The lumber industry in the States of Oregon and Washington, west of the Coast Range, has a possible sawing capacity of approximately 30,000,000 feet per 8-hour day of Douglas fir, spruce, hemlock and cedar. There is no occasion to add anything relative to the well-known qualities of this western lumber.

That is right, is it?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Further:

The Port Angeles, Wash., mill is conservatively rated at 400,000 feet board measure per eight-hour day. The Toledo or Lincoln County, Oreg., mill is conservatively rated at 250,000 feet board measure. The addition of these two mills to the present sawing capacity of the industry as a whole will increase the daily production capacity slightly over 2 per cent.

Col. STEARNS. Yes, sir.

Mr. MAGEE. So you would still depend very largely, I assume, upon the amount of spruce that would be produced by the hundreds of mills on the coast here?

Col. STEARNS. Oh, my gracious; yes, sir.

Mr. MAGEE. They were the important factors?

Col. STEARNS. Absolutely; yes, sir.

Mr. MAGEE. They were the mills that were functioning?

Col. STEARNS. Yes, sir.

Mr. MAGEE. They were producing lumber instead of talking!

Col. STEARNS. That is perfectly correct; yes, sir. I can not say too much in praise of the lumbermen of this Northwest.

Mr. MAGEE. I say, they were getting out the stuff that the country demanded and the Allies demanded, and the supply came from them!

Col. STEARNS. That is very true.

Mr. MAGEE. That is right, is it not?

Col. STEARNS. They couldn't get out—

Mr. MAGEE. Is that right or isn't it—yes or no?

Col. STEARNS. Are you talking about airplane lumber or all kinds of lumber?

Mr. MAGEE. I am talking about airplane lumber.

Col. STEARNS. No, sir; that is not all together—

Mr. MAGEE. You can include other lumber if you want.

Col. STEARNS. A certain amount of airplane stock was coming from them, but the finished airplane stock was not coming from them.

Mr. MAGEE. Answer the question. They were doing the brunt of the work?

Col. STEARNS. No, sir.

Mr. MAGEE. You were doing the brunt of the work?

Col. STEARNS. No, sir; we were doing it together.

Mr. MAGEE. Who was doing the greater part or the brunt of the work?

Col. STEARNS. Well, here are the figures here, the spruce produced.

Mr. MAGEE. Yes, give us those figures. I have been waiting a long time for them.

Col. STEARNS. The outside mills shipped East 66,000,000 of the 143,000,000, and the cut-up plant shipped East 76,000,000 of the 143,000,000. Now then, the outside mills were functioning right in cooperation with the cut-up plant. Instead of furnishing—

Mr. MAGEE. Now, instead of getting on another dissertation will you kindly answer my question?

Col. STEARNS. That is the question you asked me, as I understand it.

Mr. MAGEE. Then answer it now. You say that the outside—

Col. STEARNS. It doesn't answer it in full, Mr. Magee, and I would like to state fully the whole thing.

Mr. MAGEE. You can state anything you have a mind to when I get through with you. I am only asking you to answer my questions, if you will.

Col. STEARNS. I have not answered it in full, yet, sir.

Mr. MAGEE. I asked you how much was produced at the outside mills. Now, give me your figures.

Col. STEARNS. The outside mills produced 66,355,532 feet of airplane lumber.

Mr. MAGEE. That is, of the 143,000,000?

Col. STEARNS. Of the 143,000,000.

Mr. MAGEE. Now, who produced the balance?

Col. STEARNS. The 76,653,529, being the balance of the 143,000,000 plus, was shipped from the cut-up plant.

Mr. MAGEE. From the cut-up plant, but who produced it for the cut-up plant?

Col. STEARNS. The whole show, Mr. Magee. It started with the loggers, the loggers did part of it, and when the loggers got through the millmen set the cants.

Mr. MAGEE. Just wait a minute, I thought you understood my question, but the trouble is, of course, I think you are evading me a little.

Col. STEARNS. No, sir. This thing is like that [indicating] and you can not separate any one of the units.

Mr. MAGEE. I am only asking for information. What I am trying to get at, if I can, so that we will understand it—because we have to make a report to the House.

Col. STEARNS. I can explain it to you.

Mr. MAGEE. When we get before the House we can not depend on hot air, because our colleagues will immediately question us, and we have got to have some substantial evidence here upon which to base our report. When we make a statement to our colleagues in the House we have got to stand behind our guns and be able to substantiate it, whatever the statement may be.

Col. STEARNS. Here are the figures, sir.

Mr. MAGEE. That is what I am asking these things for. What I want to get at now, is what part of that 143,000,000 feet of spruce lumber your other three cost-plus corporations produced?

Col. STEARNS. They did not produce lumber, sir, they produced cants and logs.

Mr. MAGEE. If they did not produce any of this spruce lumber, then that answers my question.

Col. STEARNS. No, sir; I think you are leaving us under a misapprehension of the cost-plus operators. This was done at the cut-up plant under Government operation.

Mr. MAGEE. But the lumber would have to come from some place to get to the cut-up plant?

Col. STEARNS. Do you mean the logs or do you mean the cants?

Mr. MAGEE. The logs, of course.

Col. STEARNS. You said lumber, and there is a difference.

Mr. MAGEE. What I want to get at, and I think you understand—

Col. STEARNS. No, sir; I do not.

Mr. MAGEE (continuing). Is how much of this 143,000,000 feet was produced by the Warren Spruce Co., and the other companies?

Col. STEARNS. May I explain to you how we operated that?

Mr. MAGEE. If you can give me those figures you will answer the question.

Col. STEARNS. I can make that clear to you in a minute, if you will give me permission to explain it in my own way.

Mr. MAGEE. Can't you answer yes or no?

Col. STEARNS. They did not produce lumber, they produced kees and cants.

Mr. MAGEE. Then they did not produce anything?

Col. STEARNS. Yes, sir; they did.

Mr. MAGEE. How much of that lumber, or logs, or whatever went into the airplane production was produced by those three cost-plus contractors?

Col. STEARNS. They produced logs and flitches. I can give you the amount of logs and flitches they produced.

Mr. MAGEE. Well, you have given me the amount in feet produced.

Col. STEARNS. I am giving you the amount of lumber.

Mr. MAGEE. Now, I want to know what was produced. I want the similar figures for these three cost-plus contractors.

Col. STEARNS. Lumber and logs are different things. This is the lumber, part manufactured by the mills outside, and part manufactured by the cut-up plant as I have given the figures.

Mr. MAGEE. It is so small that you really do not want to state it, isn't that the fact?

Col. STEARNS. No, sir; I am mighty proud of what those men did.

Mr. MAGEE. You are? Then give me the number of millions of feet that were produced under those three cost-plus contracts?

Col. STEARNS. Now, if you want to know the amount of —

Mr. MAGEE. Read the question.

(Question repeated.)

Col. STEARNS. Those three cost-plus contracts—there were 7.4 per cent of the 143,000,000—no, that is not right—yes, 7.4 per cent of the

lumber shipped east was produced from the raw material, the logs and the flitches from the cost-plus operations. The rest of these logs were produced by the outside industry and shipped to the mills, then the mills cut these flitches, these cants, and sent them to the cut-up plant.

Mr. MAGEE. That is just what I want to get at.

Col. STEARNS. Let me give you one more step and you will have it all.

Mr. MAGEE. No, I am doing this questioning, and I think we will get it in time. You say that the outside mills produced 66,000,000, wasn't it, and something?

Col. STEARNS. The finished lumber, but that is not the cants.

Mr. MAGEE. Of the 143,000,000. I do not care how you figure it. I want to get the percentage produced by the mills upon this coast, and the percentage of this 143,000,000 produced under these cost-plus contracts.

Col. STEARNS. The mills produced lumber and the contractors produced logs. Now, there is no comparison there. The mills produced 66,000,000 feet of lumber. The cut-up plant produced 76,000,00 feet of lumber. Now, that lumber was made up from logs that came from the loggers and from the cost-plus operations.

Mr. MAGEE. Now, what percentage of that came from the cost-plus contracts?

Col. STEARNS. I say, of this 143,000,000 feet 7.4 per cent came from the raw material, that is, the logs and flitches that were furnished by the cost-plus contractors, and the rest of it was furnished by the loggers.

Mr. MAGEE. Now, that answers my question. So they furnished a little less than 8 per cent and the loggers furnished a little more than 92 per cent?

Col. STEARNS. That is correct, sir. That is loggers, but you were getting the millmen and the loggers mixed, and I wanted to get that straight.

Mr. MAGEE. I think we understand. I wanted to get the percentage produced under these cost-plus contracts and the percentage produced by the loggers, as you term them, and that answers that question.

Mr. MAGEE. You spoke something yesterday about using the soldiers to stabilize labor conditions.

Col. STEARNS. Yes, sir.

Mr. MAGEE. I want to see if I have a correct impression of that. As I understand, under those cost-plus contracts the labor was largely performed by the soldiers.

Col. STEARNS. Yes, sir.

Mr. MAGEE. Was there any civilian labor—

Col. STEARNS. Yes, sir.

Mr. MAGEE (continuing). Employed under the cost-plus contracts?

Col. STEARNS. Yes, sir; a lot of it.

Mr. MAGEE. What percentage would you say was civilian, say in the Siems-Carey-Kerbaugh contract?

Col. STEARNS. Mr. Sawyer could give you more definite information. I am not informed as to how many civilians they had. I know they had approximately 4,000 soldiers.

Mr. MAGEE. Do you know how many civilians they had?

Col. STEARNS. No, sir.

Mr. MAGEE. They didn't have 4,000 civilians, did they?

Col. STEARNS. I am not prepared to say, sir.

Mr. MAGEE. Wasn't it a fact that the number of civilians was a small percentage—

Col. STEARNS. Not so very small.

Mr. MAGEE (continuing). Of the total number of workers?

Col. STEARNS. Not very small. It varied from time to time with the nature of the work.

Mr. MAGEE. Can Maj. Sawyer give us that percentage under each of these cost-plus contracts?

Col. STEARNS. No sir. He can give it for his. The other supervisors—

Mr. MAGEE. I want to know whether I am right or not, and the House I assume is very much interested in this proposition. I want to know whether, as a proposition generally speaking, the work was performed by the soldiers under these cost-plus contracts, rather than by civilians?

Col. STEARNS. I can't differentiate, because they both did it. There were more, a great deal more soldiers than civilians—there is no doubt about that, and the percentage varied very much, and it varied from time to time.

Mr. MAGEE. Who can give the figures under each of these cost-plus contracts, in that respect?

Col. STEARNS. The supervisors could give it closer, probably, than anyone.

Mr. MAGEE. Can you prepare a statement and submit it to the committee, showing that fact?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Will you do it, Colonel?

Col. STEARNS. Yes.

Mr. MAGEE. Or cause it to be done.

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, you said something about taxes—income taxes, and excess profit taxes, paid by the Siems-Carey-Kerbaugh Corporation. Now, those taxes which they paid were taxes which every person, firm, and corporation in the United States, earning sufficient money to come within the provisions of the statute, would be subject to, were they not?

Col. STEARNS. If the—

Mr. MAGEE. Oh, just answer that question.

Col. STEARNS. No, sir; not exactly.

Mr. MAGEE. If you were—

Col. STEARNS. Because—

Mr. MAGEE. No; the point is here, now: This law, which Congress passed, applies to every individual and every firm and every corporation doing business within the jurisdiction of the United States, as to income taxes and excess-profit taxes, doesn't it?

Col. STEARNS. Yes.

Mr. MAGEE. Applied to me, applied to you.

Col. STEARNS. Not the 80 per cent doesn't.

Mr. MAGEE. If you earn enough money it would, wouldn't it?

Col. STEARNS. If the capital stock were in the right class.

Mr. MAGEE. There is no discrimination against anybody; it would apply to everybody doing business under the jurisdiction of the United States?

Col. STEARNS. Yes, sir.

Mr. MAGEE. And if you made a contract, or I made a contract, or anybody else made a contract, and he earned money enough, the earnings would be subject to the exactions of the law—

Col. STEARNS. Yes, sir.

Mr. MAGEE. Enacted by Congress. So you would not be in favor of exempting the Siems-Carey-Kerbaugh corporation from income taxes, or excess-profit taxes, would you?

Col. STEARNS. No, sir; no man.

Mr. MAGEE. And, of course, the law was enacted, I think, in the fall of 1916—or was it 1917? Well, whenever it was, I say it is to be presumed that any person or corporation entering into a contract would enter into the contract with knowledge that he would have to pay an income tax, or an excess-profit tax, provided his income was sufficient to pay the tax?

Col. STEARNS. Certainly would.

Mr. MAGEE. Or his profits were sufficient to come under the provisions of the law—that is right, isn't it?

Col. STEARNS. I think it is fair to make that assumption.

Mr. MAGEE. So that there is nothing to that.

Col. STEARNS. Yes. I don't contend that at all.

Mr. MAGEE. Well, that answers it. If you still think there is something to it, hang to it.

Col. STEARNS. Yes, sir.

Mr. MAGEE. Now, about the soldiers stabilizing conditions. The mills that were functioning on the coast, I assume, had more or less trouble with labor conditions?

Col. STEARNS. Yes, sir.

Mr. MAGEE. Don't you think that a few soldiers, a handful of soldiers, four or five soldiers, at one of these logging camps or places where there was trouble, would have had a very mollifying and stabilizing effect upon conditions where they were?

Col. STEARNS. I think they would have had a mollifying effect, but I don't think they would have had as mollifying effect as the program we inaugurated had.

Mr. MAGEE. Do you think that in any of these places, that a few of Uncle Sam's soldiers in uniform and with their guns and cartridge belts filled, in time of war—at anyone of these places, just a handful of them, would have had a very decided effect in stabilizing conditions? Answer it "Yes" or "No." I don't care which you say.

Col. STEARNS. It depends altogether on the conditions.

Mr. MAGEE. If you can't answer it, say so.

Col. STEARNS. I have answered that way. You want my answer, not yours. Now, my answer is just as I have given it.

Mr. MAGEE. Can't you answer it "Yes" or "No"?

Col. STEARNS. I don't answer that question "Yes" or "No."

Mr. MAGEE. You can't answer it "Yes" or "No"?

Col. STEARNS. I can't answer that question "Yes" or "No," because there are too many conditions.

Mr. MAGEE. If you can't answer that question "Yes" or "No," why, that is all.

Mr. LEA. One or two questions I would like to ask.

Mr. FREAR. Just a moment. I want to ask him some questions. I don't remember whether you gave us the figures on the total amount of spruce in Washington or Oregon, yesterday, that is growing. I want the total stumpage, total spruce stumpage in Washington and Oregon. We haven't the figures here. Have you got it?

Col. STEARNS. I think we have that.

Mr. FREAR. It is my recollection that something was said about it.

Mr. LEA. He promised to produce it.

Mr. FREAR. I think he has probably got that. [Col. Stearns referred to document.]

Mr. FREAR. What page is that which you have?

Col. STEARNS. Page 8:

Character and distribution of the lumber cut of Washington and Oregon.

Mr. FREAR. That isn't it. I asked for the stumpage, the amount of spruce that is growing, according to the cruises, in Washington and Oregon. I have seen that.

Col. STEARNS. All right.

Mr. FREAR. I asked for it yesterday. If you haven't it here, all right.

Mr. LEA. That was the information that he yesterday promised to deliver at Portland.

Mr. FREAR. Well, I didn't know that that was——

Col. STEARNS. Yes, sir; I haven't got it. I thought I had it.

Mr. FREAR. All right.

Col. STEARNS. We will get that.

Mr. FREAR. Have you entered into any contracts, recently, in regard to the sale of logs that are upon the right-of-way of the Siems-Carey-Kerbaugh Corporation?

Col. STEARNS. Yes, sir.

Mr. FREAR. How recently?

Col. STEARNS. What?

Mr. FREAR. How recently was the contract made?

Col. STEARNS. About two months ago, sir.

Mr. FREAR. With whom?

Col. STEARNS. Mr. Erickson.

Mr. FREAR. Have you a copy of the contract here?

Col. STEARNS. No.

Mr. FREAR. What did that contract provide, do you know, in general terms?

Col. STEARNS. In a general way, yes, sir. The contract provides for the removal and sale of the logs over a certain length of the road.

Mr. FREAR. That belong to the Government?

Col. STEARNS. Yes, sir.

Mr. FREAR. What else?

Col. STEARNS. That is the main feature of the——

Mr. FREAR. What else, what other terms in the contract, regarding his own logging, regarding his own logs, his own timber?

Col. STEARNS. He is to remove them, he is to remove that stuff from that.

Mr. FREAR. Is there anything in that contract that refers to his own stumpage and his right to remove by this road?

Col. STEARNS. On application to our office, I believe, sir, we can make such an arrangement.

Mr. FREAR. Don't you know?

Col. STEARNS. I am not familiar with all the details of that at the present time.

Mr. FREAR. I am not asking for all the details, I am asking for a simple answer to that question. What does that contract provide in regard to Erickson's own timber along that right-of-way?

Col. STEARNS. I don't remember.

Mr. FREAR. Outside of that—

Col. STEARNS. I don't remember the exact terms of that now.

Mr. FREAR. Do you know anything about it?

Col. STEARNS. Yes.

Mr. FREAR. Tell what you know.

Col. STEARNS. I have told you in general what that is.

Mr. FREAR. That is just what I want to know, in general.

Col. STEARNS. That contract will be at your disposal at any time.

Mr. FREAR. I want the answer of what you know in general.

Col. STEARNS. I have told you what I know in general.

Mr. FREAR. You haven't told a word excepting that it generally provided—in what respect?

Col. STEARNS. I know I approved of that contract after looking it over. It has been some time. There have been a great many figures going through my head since that time.

Mr. FREAR. Don't talk that way. Just give an answer "Yes" or "No." Do you know anything about that contract, whether it refers to Erickson's own private stumpage?

Col. STEARNS. I don't recall now whether it referred to that, now, or not.

Mr. FREAR. Is there anything in it?

Col. STEARNS. I don't recall, I say.

Mr. FREAR. Well, have you made any contracts with any private individual, over a Government road, for the carrying of their private stumpage; if so, why and how and by what authority?

Col. STEARNS. Yes; we have a contract for the removal of stumpage purchased by loggers on the Nemah Railroad; we are leasing the road for that operation.

Mr. FREAR. To-day?

Col. STEARNS. To-day.

Mr. FREAR. On Government stumpage?

Col. STEARNS. Not on Government stumpage. You said on private stumpage.

Mr. FREAR. Yes.

Col. STEARNS. And you asked for our authority.

Mr. FREAR. Yes.

Col. STEARNS. And the authority for that is that this is a corporation, and when we consider it proper—

Mr. FREAR. Has the War Department given you any authority to permit Erickson to remove his timber along this Kerbaugh line of road?

Col. STEARNS. The War Department has given us authority to make contracts concerning those properties.

Mr. FREAR. All kinds of contracts?

Col. STEARNS. All kinds of contracts concerning the properties which the corporation owns. That is, a State corporation; we are working under the laws of the State of Washington on that; we are working on more important Government matters—

Mr. FREAR. Strike out that; that is not responsive. This is a Government corporation, and it is Government money that functions it.

Col. STEARNS. Yes.

Mr. FREAR. And you have given contracts to private individuals, as I understand, for the use of these public roads, for the carrying on of their own logging; is that right?

Col. STEARNS. That is true in that case I have mentioned.

Mr. FREAR. That is the case with the Erickson logging, isn't it? He is cutting the logs out there now, his own timber, isn't he?

Col. STEARNS. I believe that is the case there. It certainly is the case on the Nemah road; we have very good contracts with those gentlemen.

Mr. FREAR. I presume a good contract. Has any other logger got a right to cut logs and ship them on this Siems-Carey-Kerbaugh line?

Col. STEARNS. We will make arrangements if anybody wants to use that line.

Mr. FREAR. That is not an answer. I asked you if any other company did have.

Col. STEARNS. They haven't now. I said we would gladly make arrangements if they want that right.

Mr. FREAR. And the authority is all vested in you, is it?

Col. STEARNS. Vested in me and my board of directors, sir.

Mr. FREAR. Who is your board of directors?

Col. STEARNS. That is on the minutes, on the record. Do you care to have me go over it again?

Mr. FREAR. Tell who the board of directors were that passed on the contract to give Erickson the right to log there, and I assume that the minutes afterwards can be produced to show the authority which was granted unless you did it all individually.

Col. STEARNS. I am not positive whether I did it individually, or whether the board did that particular one. I would like to look that up.

Mr. FREAR. Yes. You don't wait for the board to act in matters of this kind, do you, necessarily?

Col. STEARNS. Not on a routine matter, where it is obviously for the benefit of the Government, I do not.

Mr. FREAR. Strike the last of that out—"where obviously for the benefit of the Government." I want answers that are responsive, and strictly those, as nearly as we can come to them.

Col. STEARNS. I want to give you the truth.

Mr. FREAR. The truth as you view it; but what we want is an answer "Yes" or "No," or substantially that.

You have made contracts and assumed the power without any special authority, individually, to give to anyone you see fit the right to log on a Government road, or to refuse anyone you see fit the right to log on a Government road, and you assumed it all yourself.

Col. STEARNS. No. Corporation roads, not Government roads.

Mr. FREAR. You consider you are the head of a corporation, also, that is maintained by the United States Government, do you?

Col. STEARNS. I consider that, and that road that is to be operated is under my jurisdiction at the present time.

Mr. FREAR. You consider that you are more important, or that you have more authority in this than the War Department, do you?

Col. STEARNS. Absolutely not.

Mr. FREAR. Who is over you, then?

Col. STEARNS. The Director of the Aircraft Production is the officer who votes the stock, and I consult or defer to his desires when he makes them known, or on important questions I will take the matter up with him.

Mr. FREAR. Have you taken up any of these matters with him?

Col. STEARNS. I have not. I didn't consider them sufficiently important.

Mr. FREAR. I understand all these matters, just like the adjustment of soldiers' wages, just like the determination of the allotment of soldiers, you decided for yourself, did you?

Col. STEARNS. I did, certainly.

Mr. FREAR. We are glad to fix the authority. And your previous experience in lumbering and in railroading and all was what before you came here?

Col. STEARNS. You have that on the record, sir.

Mr. FREAR. What was it, anything?

Col. STEARNS. No, sir.

Mr. FREAR. Never had any. When did Mr. Disque leave?

Col. STEARNS. He left along in the middle of March.

Mr. FREAR. This statement was made February 15. He left a month afterward.

Col. STEARNS. Yes, sir.

Mr. FREAR. The statement was made by whom?

Col. STEARNS. The comptroller.

Mr. FREAR. Who is the comptroller?

Col. STEARNS. Mr. Campbell—C. C. Campbell.

Mr. FREAR. Where is he?

Col. STEARNS. He is in Portland.

Mr. FREAR. Is he now?

Col. STEARNS. Yes, sir.

Mr. FREAR. What was done with it after he prepared the figures?

Col. STEARNS. I don't know whether he prepared this here or in Washington. Anyway, I believe those figures were made, sent right on, or taken, or were prepared there.

Mr. FREAR. By whom?

Col. STEARNS. By Mr. Campbell, who prepared them.

Mr. FREAR. Didn't your organization, in a matter of this importance, give it any consideration?

Col. STEARNS. He is our comptroller.

Mr. FREAR. Well, that is not an answer. Just answer that question "Yes" or "No."

Col. STEARNS. Yes, they gave it consideration.

Mr. FREAR. Tell me what consideration they gave.

Col. STEARNS. It was done before my time, sir; I don't know; it wasn't my duty at that particular time to investigate it.

Mr. FREAR. You say it was done before your time.

Col. STEARNS. February 15 is the date.

Mr. FREAR. February 15, 1919. Weren't you in Portland at that time?

Col. STEARNS. I was, but not in charge of that particular work.

Mr. FREAR. Weren't you a close adviser, on all occasions, of Mr. Disque, as you said?

Col. STEARNS. Not on every single matter.

Mr. FREAR. Were you ever advised with in regard to these estimates?

Col. STEARNS. No, sir.

Mr. FREAR. No?

Col. STEARNS. Let's see—no, I don't think I was.

Mr. FREAR. Disque was here at that time, in charge, was he not?

Col. STEARNS. I think he was in Portland when that was sent; I am not positive.

Mr. FREAR. Here is a very important agreement or understanding, not for a comptroller or clerk to get out, but for this great corporation of which you are the head to-day, and he was the head then.

Col. STEARNS. Yes, sir.

Mr. FREAR. On which the basis was to be made of settlement with foreign Governments.

Col. STEARNS. Yes, sir.

Mr. FREAR. Do you mean to say there is nothing on record in your office in regard to this statement that was gotten out by this clerk?

Col. STEARNS. You may perhaps find something more. It was not given out by a clerk; it was given out by an officer of the corporation.

Mr. FREAR. He is a clerk, isn't he?

Col. STEARNS. No, sir; he is an officer of the corporation, elected by the board of directors, the comptroller of the corporation, and the man who is supposed to do work of that nature.

Mr. FREAR. Then on an important matter of this kind, which concerns foreign Governments, your corporation presumed to let him decide this question without any action on your part?

Col. STEARNS. I am not in a position to state that, because I believe that was all handled, as I say, before my time.

Mr. FREAR. But you were associated with Disque at this time?

Col. STEARNS. Not in that matter.

Mr. FREAR. As his right-hand man, weren't you?

Col. STEARNS. Not for that kind of a thing.

Mr. FREAR. Wasn't Eamen associated with him?

Col. STEARNS. Yes, sir.

Mr. FREAR. Eamen was the man who sat on a board and gave contracts to another member of the board, according to the finding of the Michigan Legislature, didn't he?

Col. STEARNS. What?

Mr. FREAR. He sat on the board of control, in Michigan, and let contracts to another member of the board, as I read here yesterday into the record, didn't he?

Col. STEARNS. I am not prepared to say that. If the record states that, it may be the case. I am not able to state.

Mr. FREAR. Eamen was advising with Disque at this time, was he not?

Col. STEARNS. I am not sure whether Maj. Eamen was here then or not.

Mr. FREAR. Who was here then, besides you and Disque?

Col. STEARNS. Oh, most of the old organization was here. Some had gone.

Mr. FREAR. Well, it is fair to assume, isn't it, or if you don't want to admit it you need not, but isn't it fair to assume that your corporation did take some action on this particular statement?

Col. STEARNS. Absolutely; yes, sir.

Mr. MAGEE. I neglected to offer Exhibit "G."

Mr. FREAR. I offer that in evidence.

(Document referred to was marked Exhibit "G," Stearns, August 21, 1919.)

Mr. FREAR. This executive officer in your corporation, whom you say is not a clerk, did he make the estimates, an examination of the various assets and property belonging to the corporation?

Col. STEARNS. I don't know just exactly how he arrived at it. As I have stated, it was before I came into the control of the corporation.

Mr. FREAR. It was before you came into the control, but you were the close adviser of Disque at that time?

Col. STEARNS. Not in such matters.

Mr. FREAR. Who was?

Col. STEARNS. I don't know who Col. Disque advised with in that connection.

Mr. FREAR. Let's find out. Who was your commission—this board of directors, at that time? You answered quickly enough to the counsel—to Mr. Lea; answer me. Who was it? I have asked twice.

Col. STEARNS. Who were on the board of directors?

Mr. FREAR. Yes; at that time?

Col. STEARNS. There was Mr. Ladd and Mr. Donovan.

Mr. FREAR. Mr. Ladd, of Portland?

Col. STEARNS. Portland.

Mr. FREAR. Mr. Donovan, of Bellingham.

Col. STEARNS. Bellingham. I think at that time Mr. Mark Reed, of Shelton; Mr. Bevis, of the State of Washington. I think Mr. Eamen was on the board of directors at that time.

Mr. FREAR. But you don't know whether he was present?

Col. STEARNS. I am not sure whether he was present. I think he was, but I am not sure.

Mr. FREAR. You think he was.

Col. STEARNS. And Gen. Disque and myself. I think that is all.

Mr. FREAR. That is all. When did you first see this statement?

Col. STEARNS. I don't recollect exactly.

Mr. FREAR. The committee never saw this statement, it is fair to say, that is, until yesterday, did they, until it was brought out by your examination?

Col. STEARNS. I never have—I don't recall exactly—what, this committee?

Mr. FREAR. Yes.

Col. STEARNS. I don't think so.

Mr. FREAR. So we have not had the benefit of this, although it was requested, as you will find in the questions at Washington.

I am reading now on page 3. The total property accounts reach \$23,285,581. The estimated value—salvage value—found by your

executive officer or clerk, or whatever he may be, was \$3,908,000. The first item consists of land and timber lands, in which the estimated salvage value is practically the same as the timber. The haulage equipment is 25 per cent of the salvage value. The donkey-engine equipment, of \$1,475,000, is put at 20 per cent, \$295,000. The railroad equipment—that means locomotives, cars and so on, I assume. doesn't it?

Col. STEARNS. Yes.

Mr. FREAR (continuing). Reached \$651,933, of which 20 per cent is \$130,000. That is, that had—the railroad equipment in that short time that had been used had diminished, according to this statement, 80 per cent; that is right, is it?

Col. STEARNS. No, sir. I think it means the market possibly had diminished for that at that time.

Mr. FREAR. The market you estimate had diminished 80 per cent!

Col. STEARNS. For that stuff that we had.

Mr. FREAR. Yes; the railroad equipment—that is, the rails, etc., of \$1,000,000, had diminished to \$250,000; that is, that had diminished 75 per cent at that time, had it?

Col. STEARNS. I have stated, Mr. Frear, that that is an estimate made at that time. I don't say that those were depreciated at that time. That was an estimate of what that depreciation might be.

Mr. FREAR. I understand it was an estimate made at that time, that inside of three months, or thereabouts, or four months this property had depreciated 75 per cent, that is, the railroad equipment.

Col. STEARNS. No, sir.

Mr. FREAR. That is the figures here, isn't it?

Col. STEARNS. No, sir.

Mr. FREAR. Well, will you come here and correct them, then?

Col. STEARNS. The estimated salvage value. That is not necessarily an estimated depreciation. That simply means that could we have gotten—that we estimate that at that time we could not have gotten more than 25 per cent.

Mr. FREAR. Isn't that the same?

Col. STEARNS. No, sir. You stated—an article depreciates in value when it is so worn that it is not fit for use.

Mr. FREAR. It may depreciate in value because you have only one possible purchaser; that is true, isn't it? It is a depreciation purely. As an accountant yourself, as a scholar yourself, as one who knows the meaning of the word "depreciation," doesn't that mean that it depreciated from a million dollars down to \$250,000?

Col. STEARNS. Under that interpretation.

Mr. FREAR. That is the only possible interpretation.

Col. STEARNS. Not the only one.

Mr. FREAR. Let's see where you distinguish?

Col. STEARNS. But you speak of—

Mr. LEA. It is simply a question of whether it is depreciation in intrinsic worth, or in market value.

Mr. FREAR. No, it is a question of whether it is depreciation in value.

Mr. LEA. That is the only distinction he makes.

Mr. FREAR. It is dollars and cents either way, in figures.

Col. STEARNS. It is dollars and cents.

Mr. FREAR. Marine equipment \$85,000 you have got down to \$20,000. Tools and appliances of \$600,000 were down to 10 per cent; that is they had depreciated so far as their salvage value is concerned 90 per cent inside of three or four months.

Col. STEARNS. As so estimated at that time.

Mr. FREAR. Furniture and fixtures \$354,000 had diminished 80 per cent and were carried at \$71,000. Railroad construction of \$8,742,100—there is no estimated percentage but it is put down at \$750,000, which is approximately 8 per cent, is it not? That is, it had depreciated about 92 per cent so far as its salvage value is concerned inside of three months, is that right?

Col. STEARNS. That was the estimate—the low estimate made at that time at what possibly might occur.

Mr. FREAR. The general construction of \$69,000—nothing appears in that estimating value. There is nothing there. General construction—that is wiped out.

Col. STEARNS. Yes.

Mr. FREAR. \$191,000 in district construction—that is wiped out nothing shown. Camp construction \$1,083,932, that is wiped out—nothing in the next column. Construction, overhead, salaries and so forth, that is \$322,265—nothing there. Construction of the Siems-Carey-Kerbaugh sawmill \$2,395,345. That is more than we were talking of yesterday in the estimates.

Col. STEARNS. It was the estimate at that time.

Mr. FREAR. That is marked here as the cost.

Col. STEARNS. Estimated cost.

Mr. FREAR. There is no estimate, or estimated salvage at all, but that is cost.

Col. STEARNS. The cost will not be determined until final settlement with Siems-Carey-Kerbaugh is made.

Mr. FREAR. Well, but the cost of the mill will be determined. That don't have anything to do with your settlement with Siems-Carey-Kerbaugh, does it, when it is a question of dollars that is gone into the mill?

Col. STEARNS. When the exact number of dollars that has gone into that mill is determined. It was not determined at that time.

Mr. FREAR. What is it now?

Col. STEARNS. I will have to ask the man that has got the figures.

Mr. FREAR. Here is the cost of the Siems-Carey-Kerbaugh sawmill. That looks as though it were a definite figure.

Col. STEARNS. It was not possible at that time to have a definite figure. That is the best figure obtainable at that time.

Mr. FREAR. It was down to the exact cents which that cost figured at at that time. Was that the cost of the mill at that time?

Col. STEARNS. The estimated cost at that time, I understand.

Mr. FREAR. How did they figure the 14 cents as an estimated cost of \$2,300,000 project. I will ask the comptroller how he did that.

Then you do not know?

Col. STEARNS. No; I do not know.

Mr. FREAR. Then he must have had the exact figures.

Col. STEARNS. No; he could not have had the exact figures at that time.

Mr. FREAR. That mill proposition figured, at 10 per cent, \$239,000; that is, that figured 90 per cent depreciation—part of it—inside of about 60 days, was it not, that mill over here? It was built in about 90 days, was it not, and 90 per cent depreciation figured here; is that right?

Col. STEARNS. Under your statement——

Mr. FREAR. No; under the statement here; not under my statement, but under the statement here. Do you want the committee to see it!

Col. STEARNS. I understand what it is.

Mr. FREAR. Is not that the truth here that there is 90 per cent depreciation figured from the value?

Col. STEARNS. If you consider lack of purchasers as depreciation value, that is true.

Mr. FREAR. That is, that 90 per cent was provided that Siemens-Carey-Kerbaugh did not take the mill which was one of the inducements of their contract. Construction Vancouver cut-up, \$1,073,031. That is right across from Portland, and that is figured as the salvage value of \$100,000.

Col. STEARNS. You see that is on the Government reservation and can not be sold as an outside plant.

Mr. FREAR. What is the difference. I am asking whether it can be sold as an outside plant or not. To-morrow the Secretary of War or Congress can sell it, can't they?

Col. STEARNS. If you want to sell the whole coast.

Mr. FREAR. That is what I mean; that this estimate is a part of the assets of the corporation and you will get a salvage of from 1 down to 9 per cent. That is your estimate, that there was 91 per cent loss in this estimated salvage value.

Col. STEARNS. Yes.

Mr. FREAR. Construction of the Toledo mill. Do I understand you corrected me yesterday on that? I thought it was over \$800,000, and it is \$985,487. It lacks \$14,000 and something of being \$1,000,000. This is put in at \$200,000. That is a depreciation of about 80 per cent. Is it not?

Col. STEARNS. Yes.

Mr. FREAR. The construction of the Vancouver warehouse is \$21,000. There is nothing put opposite that; why not?

Col. STEARNS. The Vancouver warehouse?

Mr. FREAR. Yes.

Col. STEARNS. That is in the same category as the mill. It can not be disposed of unless the ground is disposed of.

Mr. FREAR. Don't you own the ground?

Col. STEARNS. The Government does, Mr. Frear, but we don't estimate that the Government will sell that valuable post.

Mr. FREAR. I see your point there. Supplies on hand \$2,400,790; that is 33 per cent, about \$80,000. Stumpage rights, \$26,516. That has no estimated salvage value. What is the meaning of that?

Col. STEARNS. It means payments for stumpage. There will be no salvage return—nothing to sell.

Mr. FREAR. Who asked for this report?

Col. STEARNS. I understand the British were very anxious to make a settlement right away.

Mr. FREAR. That was not the question. Who asked for this report? Answer the question.

Col. STEARNS. The British representative. I do not know his name.

Mr. FREAR. Did he ask you?

Col. STEARNS. No, sir.

Mr. FREAR. Did the department at Washington ask you for this?

Col. STEARNS. Yes.

Mr. FREAR. Then why didn't you say so? It was not the British representative, it was the department at Washington that asked you for this.

Col. STEARNS. They acted as a go-between only.

Mr. FREAR. They are the ones that asked you for this report.

Col. STEARNS. Yes, they were the ones that sent the wire, I understand.

Mr. FREAR. You understand a lot of things. But it is the department at Washington that sent this request to your corporation, the corporation of which you are the head, for this statement.

Col. STEARNS. I am not positive, but I believe all of these communications are signed by Gen. Menoher.

Mr. FREAR. This was furnished Gen. Menoher in order to do so. What did he want it for?

Col. STEARNS. In order to make a settlement that time with the British.

Mr. FREAR. And this statement was sent from here to Gen. Menoher?

Col. STEARNS. Yes.

Mr. FREAR. On which you based your settlement with England?

Col. STEARNS. Yes.

Mr. FREAR. And France?

Col. STEARNS. Yes.

Mr. FREAR. And Italy?

Col. STEARNS. No; that is the basis for England only. I do not know whether the others will use that or not. It was sent through for England.

Mr. FREAR. You stated a few minutes ago that the French and Italians will settle on the same basis.

Col. STEARNS. I beg your pardon. I said in all probability they will settle on the same basis.

Mr. FREAR. We are willing to accept your amendment on the basis of \$23,000,000, with a loss of practically 90 per cent. This settlement was made with England.

Col. STEARNS. So I understand.

Mr. FREAR. And you were saying yesterday to this committee that you proposed to get the approximate value of these properties.

Col. STEARNS. The approximate reproduction value.

Mr. FREAR. And you think that was honest and square with the government we are doing business with.

Col. STEARNS. I do; because at that time we were not in a position to make any closer estimate than that.

Mr. FREAR. Oh, true! But what happened in all the months since when you had taken money from England? Is that honest? Didn't you know about these things being done?

Col. STEARNS. We don't know what the outcome of this thing will be, because we do not know yet what we are going to get out of our property, and our salvagable assets to this day are not yet up to

where they are in that report. It may be that we will have to junk this whole thing. It looks to me very much like there is going to be a great deal of difficulty right now in selling these properties.

Mr. FREAR. Unquestionably. But you were speaking yesterday about the minimum loss, the small loss to this Government because we had saddled onto England \$64,000,000, based on this report.

Col. STEARNS. I take exception to that remark. We have not saddled onto England anything that we have the facts on concerning now, and we do not know yet what our salvagable assets of this corporation are going to be.

Mr. FREAR. To this committee you said yesterday that you expected to get the approximate reproduction value.

Col. STEARNS. I think if you will read in the record you will find I did not say that.

Mr. FREAR. I don't care to read the record. I ask you, did you say that; yes or no?

Col. STEARNS. No, sir; I do not think I said I expected to. I said I would hold them for that.

Mr. FREAR. You would hold them for that, and yet here is a statement as a basis for the settlement with England and which you know is only 10 per cent.

Col. STEARNS. I would rather see those railroads and those real properties scrapped or burned or thrown out than given to any private operator at a great big sacrifice to the Government. I do not know yet to this day whether we are going to get one penny out of those things. They may yet have to be absolutely scrapped.

Mr. FREAR. With all of your experience in the past year in the commercial life handling \$26,000,000 you are unable to determine?

Col. STEARNS. I am unable to determine.

Mr. FREAR. Now, let us see. Here is the position you placed this Government in. Has the War Department indorsed this? Have they made a settlement on this basis?

Col. STEARNS. I understand that is so.

Mr. FREAR. Does the Secretary of War know about this statement?

Col. STEARNS. I do not know whether he does or not.

Mr. FREAR. Here is the position you have placed the Government in in dealing with foreign governments, is it not, that you have figured 10 per cent on some of the most important securities held here, and England with her eyes closed. We are holding all the cards. England has made her settlement upon that basis. We are playing with loaded dice, aren't we?

Col. STEARNS. No, sir; we are not. The cards are absolutely on the table. The records are open to England or France or anybody else to come in here and see exactly what it is and to see exactly where they are. We do not know yet whether we are going to salvage our properties, and it looks to-day as if our salvagable assets were not going to be a great deal more than that, if these real properties are not sold.

Mr. FREAR. You make a very long argumentative statement each time. Has England sent anyone over here to go over your books?

Col. STEARNS. Yes.

Mr. FREAR. What did they find?

Col. STEARNS. I do not know.

Mr. FREAR. When were they here?

Col. STEARNS. A Capt. Thompson was here for several weeks. I think it was just after the signing of the armistice.

Mr. FREAR. Who was he sent by?

Col. STEARNS. By the British commission from Washington.

Mr. FREAR. Was he a British officer?

Col. STEARNS. Yes.

Mr. FREAR. Did he make any statement to you?

Col. STEARNS. No, sir.

Mr. FREAR. Did he make any inquiries of you?

Col. STEARNS. Yes.

Mr. FREAR. What were they or of what general character?

Col. STEARNS. He came out here for information concerning our operations, and I instructed my assistant to see that he was given all the information he desired.

Mr. FREAR. Did you ever have any conversation with him as to what he ascertained?

Col. STEARNS. No, sir.

Mr. FREAR. Do you know whether or not he went through your books here to ascertain about these contracts?

Col. STEARNS. I am quite sure he did.

Mr. FREAR. Do you know?

Col. STEARNS. I do not know.

Mr. FREAR. Did you talk with anyone else about what he said?

Col. STEARNS. I saw him in all of the various offices from time to time getting information, but what he got I do not know.

Mr. FREAR. Did he go through the books, or do you know?

Col. STEARNS. I saw him with books.

Mr. FREAR. Did he have any accountant with him?

Col. STEARNS. No, sir.

Mr. FREAR. It would probably take a good many accountants to go through this thing in an intelligible way in order to make a basis for the settlement, wouldn't it?

Col. STEARNS. No, sir. We had that matter fairly well fixed so that he could have gotten the general facts on the situation quite easily.

Mr. FREAR. This committee has been unable to get this statement until yesterday, and I asked for it way back in May or June.

Col. STEARNS. I do not think we have any record of such a request.

Mr. FREAR. The request was made from Gen. Menoher's wanting to know the value of tangible assets.

Col. STEARNS. We have given several reports to Gen. Menoher; I do not know whether the one you call for or not.

Mr. FREAR. So that if we, as a Government, get out of this what you seem to think we ought to get, and which we concede ought to be gotten if possible, Great Britain has been cheated, not intentionally, I won't say that, but we have taken advantage of Great Britain to the extent of how many millions dollars, depending upon how much this salvage brings out of this \$23,000,000?

Col. STEARNS. I object to that.

Mr. FREAR. I don't care whether you object or not. I am asking whether it is so or not.

Col. STEARNS. No, sir; it is not so, because if these assets are sold they get more. I would be very glad to see our Government contribute—

Mr. FREAR. That is not the question. Has it ever been brought to your attention before?

Col. STEARNS. I do not know what they will do. That matter is absolutely up to the Finance Division in Washington to settle, and not to this corporation.

Mr. FREAR. Have you ever called their attention to this fact: that this was only 10 per cent, where you were standing out to sell these things for 100 per cent? Have you said to the Finance Division that you did not intend to sell these properties unless they were sold at their approximate reproduction value?

Col. STEARNS. That figure is made public.

Mr. FREAR. I am asking you yes or no; did you?

Col. SEARNS. No; Mr. Frear, if you want the proof of these things I can not give it all in yes or no.

Mr. FREAR. I understand that. But every time I ask you a question you begin with an argument or prefix or other supplementary statements. If you have got any statement to make of your own knowledge, not what your dreams are or what you understand about Gen. Disque, you may state it. He passed upon this, as I understand it, because he was the officer in control at that time. If you have got anything that you know yourself, not what you surmise or what you individually are willing to give Great Britain—you can not give anything nor can this committee give anything. Now, if we have covered this question and you know of any particular statement tell it to the committee in connection with this.

Col. STEARNS. Supposing we should sell these properties and get a return for them, I as the head of this corporation would be very glad—

Mr. FREAR. Strike that out, because that has not got anything to do with what we are trying to get at, what he is willing to do. His willingness cuts no figure at all.

Col. STEARNS. I think it does in this case.

Mr. FREAR. I apprehend you think so, but it cuts no figure as a matter of law or as a matter of fact.

Col. STEARNS. You are talking about the future.

Mr. FREAR. In which you have no relation or no connection so far as the Government of Great Britain is concerned.

Mr. LEA. I want to make a statement here. I submit, a while ago you called in question the motive of this witness in reference to these questions. Now he wants to give his reasons as to what he thinks would be right in the settlement with England, and I think it perfectly proper that he be permitted to state his feelings in regard to that matter. And I want to make a statement in this connection. I have no power to control the hearings of this committee, and I want to repudiate and disapprove of the manner in which this investigation is conducted. I think it is outrageous that the Representatives of the great American Congress of the United States should come here and pursue these browbeating and insulting methods in questioning a witness who by his manner shows that he is a gentleman endeavoring to tell the truth. I shall, if this method

of examination and conducting this investigation continues, go to the Congress and upon the floor of the House denounce with all the vehemence I possess what I deem to be an outrage.

Mr. FREAR. When this committee was first organized it was organized by unanimous vote of Congress. Every Democrat on the floor of the House voted for that report. When the appointments came on this committee to the chairman he at first refused to take it from the Speaker. On the day before the first witness was called the chairman placed his resignation in the hands of the Speaker, because of interference that was promised in the conduct of the investigation. This the Speaker refused to accept. The chairman then stated that there would be no effort to cover up anything in this investigation from start to finish or he would have no connection with it. One of the first witnesses called before the committee was Homer Cummings, chairman of the Democratic national committee, a man who had slandered the committee, including its Democratic member, by claiming that this was a junket, and that we were going about as a smelling committee to find out things without any expectation of a real inquiry, and when called upon for an explanation by the committee he promised us that, as the chairman of the Democratic national committee, he would continue those tactics from that time on. One Democratic member was placed upon this committee of three members, as is the usual course in every House committee. Every witness of any importance that member of this committee has cross-examined—something never known before in the history of any investigation with which I have had connection, governmental or otherwise. He has cross-examined sometimes for an hour and two hours witnesses in the House investigation. We have been sent here at the request of the House and of Judge Hughes, personally, and as recommended by his report. In the Hughes investigation the Attorney General sat at his elbow and never a question did he ask. In the Thomas subcommittee Senate investigation never a question was raised as to the efforts to get at the facts in this hearing. From the start there has been a purpose to cover up, and for one this member does not propose to stand for it.

Mr. LEA. That is what I object to. Your methods are not directed to elicit the facts. The disposition is to brow-beat the witness and deprive him of the right to give the facts. It is your methods of examination that have forced me to cross-examine witnesses. I am here to do my duty as a member of this committee, but I am not going to remain in silence in the Congress of the United States and permit this sort of examination. I am willing to go all the way with you if you are going after the facts and give the witness a fair chance. This witness is a man who is apparently an honest man and I wish him to be given the right to tell the facts and I will give you every aid in my power.

Mr. FREAR. The statement of the member of the committee that has just been offered is characteristic of some of the answers which have come to us from this hostile witness, judged from the standard of adverse or hostile witnesses. The witness's first proposition to this committee was that we must swear all witnesses. That is the procedure uniformly adopted, but as he comes as the agent of Mr. Disque with that request, according to the testimony. His next proposition

was that he wanted to make a formal statement, and he insisted upon it, and objected in the record to its disallowance, notwithstanding that the Secretary of War and other very able men and high officials have been brought before this committee and their testimony has been taken. When we have endeavored to elicit from this witness a "yes" or "no" answer he has gone off into the realms of eulogies and of uncertainty. His own judgment and his own personality has always been thrown into these answers, which is very unusual and which makes it difficult for the committee to ascertain the facts. That has been evidenced more than anything else by the replies that came to the member of this committee at my right, Mr. Magee.

He tried to keep the witness down to the record in his answers and found it a very difficult thing to do. It is necessary to ask for "yes" or "no" or definite answers, and to get those answers if possible, or this committee will not know where it is going to land when making its report. This committee is going to get those facts or it is going out of business. The committee is going to get these facts, and if we can not get them here we must try to get them elsewhere. We are going to undertake this no matter where it strikes. We intend to try to get the facts. We are not here to cover anything up. If so, my resignation will go back to-morrow. When it comes to appearing in the House, I will be only too glad to take the floor with any member of this committee or otherwise and show on that floor what has occurred up to the present time and what will occur hereafter. It is immaterial to me what occurs. We are after the facts and are going to try to get them. This is between the Democratic member of the committee and myself and does not relate to the witness.

MR. MAGEE. I want to say that if the remarks of the distinguished gentleman from California were aimed at my examination of the witness in any way, I want to except upon the ground that I feel that they are entirely unjustified and unwarranted; that so far as I am concerned, in my examination of witnesses I shall try to get direct answers of yes or no or information from the witness and will not permit in any case the witness to enter upon a dissertation instead of answering the question; that I had assumed that as far as I am concerned I had been courteous to the witness; I tried to be, and I have always tried to be in the case of the examination of every person whom I have had occasion to examine, and I shall continue in my further work on this committee along the same lines that I have followed from the beginning of the investigation, without fear or favor from any Democrat or any Republican or any other person. I propose, so far as I am concerned, to do my duty disinterestedly and wholly in the public interest and, so far as I am able, to elicit all the facts in this matter and to present them to the House, as we have been directed to do.

MR. FREAR. You testified that the United States would not be out of pocket over \$12,000,000 in substance. It that right?

COL. STEARNS. That was my opinion.

MR. FREAR. I want to be fair to the witness in regard to any question of judgment or as to figures, and he can correct them. The only question is to hold him down to our subject. That is based upon this payment of Great Britain of \$14,000,000.

Col. STEARNS. Yes, sir.

Mr. FREAR. But if we should find out that the production is not going to be so great that will have to be paid back.

Col. STEARNS. I would like to see them paid back some. It will not amount to very much of a payment.

Mr. FREAR. There is \$20,000,000 involved.

Col. STEARNS. No. You are talking now about valuation of the real properties.

Mr. FREAR. But the real properties amount to a small amount of the \$20,000,000; \$20,005,000 is the cost, and there are some construction items, but beyond that the others run to \$3,908,000 of salvage, leaving nearly \$17,000,000 or \$18,000,000 in round numbers. Part of that is going to average better than those figures?

Col. STEARNS. I hope so.

Mr. FREAR. Do you not think so?

Col. STEARNS. I believe it will be better than that.

Mr. FREAR. Judging from the sales you have made, judging from the bids you are getting, now, if it does is not the honorable thing for us to do as a Government—and I know what your answer is going to be—is it not the honorable thing for us as a Government to say immediately to these other Governments that they had the loss here and they had to depend upon us for the airplane supply and they had the erecting and equipment of the plants made—

Col. STEARNS. I think you are right.

Mr. FREAR. That has not been brought to the attention of the department because you say you had no definite information, but that is a thing that ought to be done, and must be done.

Col. STEARNS. I think so; I agree with you.

Mr. FREAR. You said this settlement was executed under protest. Why under protest, this settlement here?

Col. STEARNS. Because we were not in a position to make a fair enough estimate at the time.

Mr. FREAR. You were in a position sufficiently close to have made settlements with Great Britain?

Col. STEARNS. No, sir; we were not estimating, even widely, what return we were going to get on our properties, because the stuff had not yet been all concentrated and we had not started our sales and did not know what we were going to get.

Mr. FREAR. But this occurred five months after Great Britain made her settlement upon this basis and she could not have had any recourse on the judgment made by our Government?

Col. STEARNS. She can not have any for some time, because we have not yet exceeded that.

Mr. FREAR. Just a word as to the matter brought out by Mr. Magee. You stated that the cut-up plant at Vancouver cut 76,000,000 feet, while all the other mills only cut 56,000,000.

Col. STEARNS. I am trying to get the facts on this. The way this thing operated was the mills cut flitches or sawn cants for the cut-up plant, and the cut-up plants manufactured them into approximate dimension lumber and sent that out. Also these mills, in addition to the sawn cants that they were cutting, cut up some dimension lumber themselves, so that the dimension lumber which was shipped east amounted to 143,000,000 feet. Sixty-six million of the dimension

lumber went from outside mills and 76,000,000 went from the cut-up plant.

Mr. FREAR. But that is not a fair statement at all as given before.

Col. STEARNS. I bear witness that I tried desperately here to tell those facts to Mr. Magee.

Mr. FREAR. The cut-up plants simply used the flitches and cants brought in from the other mills?

Col. STEARNS. From the other mills, and from the private rivers, the little men who were riving, and from cost-plus operations. It covered them all in together.

Mr. FREAR. But of course you mean to say that the 66,000,000 feet is all the credit that goes to the outside?

Col. STEARNS. Absolutely, Mr. Frear; we're not trying to take any credit from these mills.

Mr. FREAR. These other mills, according to the statement of your own report, can cut 3,000,000 feet a day. Now it would only take 22 days to cut that amount?

Col. STEARNS. They are not cutting just lumber, but airplane lumber.

Mr. FREAR. Oh, yes, but you were in a position to commandeer every mill, and they were cutting airplane lumber before you got in the business.

Col. STEARNS. You know the percentage at that time.

Mr. FREAR. True, but we all learned by that, and these lumbering men and loggers could learn as rapidly—these men who had been in the business from birth—as you could who came out here.

Col. STEARNS. They were the men who taught us those things.

Mr. FREAR. And you were continually improving.

Col. STEARNS. In our cut-up plants we learned from their experience.

Mr. FREAR. But these mills could cut 3,000,000 feet a day, and in 22 days they could have cut that amount by using all those mills!

Col. STEARNS. I contend our operations were nearly doubled in efficiency by the construction of these mills. You see the others are scattered among so many mills. You can not concentrate and get the same efficiency in manufacture with mills scattered all over the country that you can by concentrating your plant there. We had to be trained, and men who were especially interested in the industry were trained and those men had to train others, and those others.

Mr. FREAR. Surely that is always the way in any line of business.

Col. STEARNS. And if the Vancouver plant was nothing else it was a great school for them.

Mr. FREAR. You said that you gave all the people who wanted help such help as you deemed necessary and you tried to determine according to your own judgment which were the ones that needed it according to the basis of production, or, in answer to Mr. Lea's question, according to what they were likely to produce?

Col. STEARNS. Yes, sir.

Mr. FREAR. You gave the Seims-Carey, Kerbaugh Co. 24-hour service, did you not?

Col. STEARNS. Yes, sir.

Mr. FREAR. Did you give that service to any other concern in the country?

Col. STEARNS. No, sir. Our answer is obvious; that operation had to get going to get that stuff out or our own production would have dropped off.

Mr. FREAR. Your production would have dropped off notwithstanding all these loggers were asking to help?

Col. STEARNS. They were helping to their utmost.

Mr. FREAR. They were?

Col. STEARNS. We called on every logger to give us everything he could.

Mr. FREAR. But you gave 4,000 men to Seims-Carey, Kerbaugh Co.? Why did you not give those 4,000 men to the different loggers that asked to help?

Col. STEARNS. Because that operation was right in the heart of the spruce that we were trying to get out.

Mr. FREAR. I understand. Could not the Goodyear people and the Merrill & Ring people, and could not some local loggers who have been in the business for a lifetime have done that instead of going to this New York concern?

Col. STEARNS. I have no record that we did not give the Goodyear people and the Merrill & Ring people all the help they asked for in the way of men.

Mr. FREAR. Do you not know as a matter of fact from the correspondence of Disque and others that the local loggers were not given the same consideration as those who came from outside? Yes or no. Do you know that that they were not given the same consideration that the Seims-Carey, Kerbaugh Co. got, as shown by the Ray report?

Col. STEARNS. You mean in furnishing soldiers?

Mr. FREAR. All kinds of priorities, soldiers and everything else.

Col. STEARNS. The soldiers were furnished to the operations, not to the owner of the operations. They were furnished to the most important operation as far as the Government requirements were concerned, according to our best judgment, not according to the owner of the operation or to the operator. Personalities did not enter into this thing.

Mr. FREAR. Seims-Carey were the only people that had soldiers for 24 hours and operated three shifts a day?

Col. STEARNS. There were lots of mills that were running straight along.

Mr. FREAR. And you were giving them soldiers?

Col. STEARNS. Not all soldiers, but we gave soldiers for extra hours.

Mr. FREAR. Where?

Col. STEARNS. The Willapa Lumber Co., and there were several others.

Mr. FREAR. How many shifts did they have?

Col. STEARNS. I think they had two; perhaps three.

Mr. FREAR. How many men did you give them?

Col. STEARNS. I think it was probably around 150.

Mr. FREAR. But you gave 4,000 to this other concern?

Col. STEARNS. One was a great big operation in the woods for lumber and milling and railroad operations, and the other was for saw-mills.

Mr. FREAR. A little bit of a thing?

Col. STEARNS. Not a little bit of a thing; they were very important in their way, but there were hundreds of them.

Mr. FREAR. They all needed help if they were going to increase your operations; they needed labor?

Col. STEARNS. There were very few that came to us that we did not give all we possibly could.

Mr. FREAR. How do you know that?

Col. STEARNS. Because I was the man that was giving out those troops and I know where those men went.

Mr. FREAR. There are men who will go on this stand who make the statement that they could not get in touch with your department in a year. Do you mean to say you were the only man, that they were to hunt you up?

Col. STEARNS. They did not need to hunt me up. All they needed to do was to write a letter to the War Department.

Mr. FREAR. And that would settle them?

Col. STEARNS. They would have been given a prompt investigation.

Mr. FREAR. An then what?

Col. STEARNS. If the status of their operation had warranted it they would have been given the help.

Mr. FREAR. Your judgment was to determine? Have you had any washouts?

Col. STEARNS. Yes, sir.

Mr. FREAR. Where?

Col. STEARNS. We had some washouts down on Quinault and on the Northern road.

Mr. FREAR. Whereabouts on the Northern road?

Col. STEARNS. There were some bad slides at various places along the road. I did not go out and I can not give you the exact miles.

Mr. FREAR. How recently was that?

Col. STEARNS. They were just cleared up about a few weeks ago.

Mr. FREAR. About two weeks ago?

Col. STEARNS. Approximately so, a little over that.

Mr. FREAR. You do not know where, or how many slides, or what proportion they were. I am speaking now of the Seims-Carey-Kerbaugh road.

Col. STEARNS. I know we had men a month or six weeks clearing those slides, having those roads straightened out.

Mr. FREAR. Have you had any trouble with your bridges there?

Col. STEARNS. Yes, we have had trouble with bridges. The last time I was over there—I think one bridge was settling.

Mr. FREAR. Have any bridges been washed out?

Col. STEARNS. Yes; that was not quite washed out, but it was unsteady.

Mr. FREAR. Only one bridge?

Col. STEARNS. That is the only one I happened to know about. There may have been slight troubles with others, but not of great importance.

Mr. FREAR. Every logging road and other roads meet with more or less trouble, do they not?

Col. STEARNS. Yes, sir.

Mr. FREAR. That is natural. We know that at the Panama Canal they have hardly gotten on a working basis yet with all the work they have done down there. But you were speaking about the question of instruction; they have learned how to care for slides at

Panama, and that is what your people are trying to learn here upon the Seims-Carey-Kerbaugh road, as well as other roads?

Col. STEARNS. Yes.

Mr. FREAR. Do you know anything about the Quinault operations?

Col. STEARNS. Only this, that it was our effort to get into the Quinault Indian Reservation as soon as possible, and it was our plan to log that reservation, put logs in the lake and tow them down to the near end of the lake and put them on the railroad that we were to prolong to that point.

Mr. FREAR. I have some letters here and copies of the answers. They are not the original, but they came from Congressman Albert Johnson's files, and they are subject to verification, and I just want to read them into the record because they are brief and they have a bearing on this subject. I will introduce these in the record.

(The letters above referred to were marked "Exhibit H for identification, August 21, 1919," and are as follows:)

WELSH & WELSH,

Raymond, Wash., November 30, 1917.

HON. ALBERT JOHNSON,
Member of Congress,
Washington, D. C.

DEAR MR. JOHNSON: Mr. T. H. Donovan called on me the other day and suggested a matter whereby the Government could acquire an abundance of aeroplane spruce for immediate use, and after listening to his suggestion I reached the conclusion that there is considerable merit in it. It is this:

The Quinault Reservation, which commences about 1 mile north of Moclips, is covered with spruce timber. This land, as I understand it, can not be sold by the Indians for several years yet, but the Indians are all anxious to sell at any reasonable price, if the law permitted them to do so. Mr. Donovan suggested that an act be passed permitting the Indians to sell this timber to the Government, receiving therefor Liberty Loan bonds. The price to be fixed by the Government.

Mr. Donovan is a man who has had years and years of experience in logging, and, as you probably remember, was manager of the Sunset Timber Co. and the Pacific & Eastern Ry. Co. for several years, and is absolutely responsible in every way, and he tells me that this timber could be gotten out in the very near future, as it would only require the construction of a road from Moclips for a distance of about 1 mile in order to reach the timber.

Whether or not this can be worked out, you know better than me, but I thought it might be a question worthy of consideration.

Yours very truly,

MARTIN C. WELSH.

DECEMBER 7, 1917.

MAJ. GEN. GEORGE O. SQUIER,
Chief Signal Officer,
United States War Department.

DEAR GEN. SQUIER: I beg to hand you herewith copy of a letter from Martin C. Welsh, Esq., of Raymond, Wash., who refers to the practicability of utilizing certain spruce timber owned by the Quinault Indians for airplane purposes.

I shall be under obligations if you will give Mr. Welsh's suggestions consideration and advise me, at your convenience, with reference to the steps to be taken.

It is proper for me to state that I have personal knowledge of the splendid quality and large quantity of spruce timber on the Quinault Indian Reservation. I know, also, that the Indians are anxious to dispose of the timber. I shall be pleased to confer with you regarding the matter should you deem a conference advisable.

Yours, sincerely,

DECEMBER 7, 1917.

HON. E. B. MERITT,
*Assistant Commissioner,
 Office of Indian Affairs.*

DEAR MR. MERITT: The inclosed copy of a letter from Martin C. Welsh, Esq., of Raymond, Wash., calls to attention a matter concerning which you and I have conferred a number of times.

I should appreciate an expression from you, giving the views of the Office of Indian Affairs regarding the practicability of the suggestion made by Mr. T. B. Donovan and tendered by Mr. Welsh.

Thanking you in advance, I am,
 Yours, sincerely,

DECEMBER 12, 1917.

DEAR MR. JOHNSON: The office has your letter of December 7, 1917, transmitting a copy of a letter of November 30, 1917, from Mr. Martin C. Welsh, of Raymond, Wash., regarding the cutting of spruce timber from the Quinault Reservation.

Recently the question of an immediate sale of this timber was taken up and it is expected that a man will arrive at Quinault the present month for an examination of a prospective sale area. There is no need for further legislation. An existing act authorizes the sale of the timber from Indian lands within the reservation, and an offering will probably be made early in the year 1918.

Very truly yours,

E. B. MERITT,
Assistant Commissioner.

HON. ALBERT JOHNSON,
House of Representatives.

HOUSE OF REPRESENTATIVES,
 COMMITTEE ON IMMIGRATION AND NATURALIZATION.
 Washington, D. C., August 2, 1919.

HON. JAMES A. FREAR,
House of Representatives.

My DEAR COLLEAGUE: With reference to your inquiry made of me yesterday, permit me to say that prior to the middle of June, 1918, I made numerous statements to those in charge of the spruce production for the Army (at headquarters here in Washington) with regard to the desirability of building north from Hoquiam into the forest reserve rather than west from Port Angeles to the standing timber in western Clallam County. I undertook to interest the Northern Pacific Railroad, but was informed that about \$5,000,000 was being pledged by the Milwaukee Road.

I made efforts in December, 1917, to arrange for the sale of spruce on the Great Quinault Indian Reservation.

I have considerable correspondence in my office concerning this matter which may be of interest to you:

I am of the opinion that the Spruce Investigating Committee will gain the greatest amount of first-hand information by investigating the great spruce belt of the Northwest headquarters for which are at Hoquiam, Wash. I am informed that Col. Disque and others, when they first undertook the governmental production of spruce desired to do their work at a considerable distance from this headquarters but were finally obliged to center their main activities there.

Yours, cordially.

ALBERT JOHNSON.

Mr. FREAR. I want to ask you what if anything you did to develop the spruce of which those letters spoke, the large quantity in the Quinault Reservation?

Col. STEARNS. We made arrangements with Mr. Alex Polson, a logger of Grays Harbor, to extend his road to the southern end of

the lake, in order to get that timber which would be cut into Quinault and raft it down the lake.

Mr. FREAR. At what time did you make that arrangement?

Col. STEARNS. Very early, almost immediately after the receipt of that letter which you read.

Mr. FREAR. That is November 30, 1917. How much timber was ever brought out from there?

Col. STEARNS. I do not believe any came out from that reservation. I do not think that road came out.

Mr. FREAR. At the expiration of all those months, from November, 1917, to November, 1918, they never were able to get the railroad up there at the Quinault Reservation?

Col. STEARNS. I think that is the fact.

Mr. FREAR. Who was in charge of that, representing the Government?

Col. STEARNS. There were two men.

Mr. FREAR. Who was the first man?

Col. STEARNS. Mr. Thomas Hutchinson, and later as it was not going fast enough we removed him and put in Mr. Grammer, whom I spoke about yesterday.

Mr. FREAR. What was the mileage?

Col. STEARNS. I am not sure of that.

Mr. FREAR. Was it 10 miles?

Col. STEARNS. I could not say; I do not know how far it was.

Mr. FREAR. How many men did you give him to help in that operation?

Col. STEARNS. We gave them, I believe, all they asked for. I can give you the exact figures.

Mr. FREAR. Did you volunteer any men?

Col. STEARNS. Oh, yes; we told them we would furnish the men.

Mr. FREAR. This was important in order to get into the reservation where there was a good stand of spruce up to the road of the Lake road?

Col. STEARNS. It was very important.

Mr. FREAR. And yet in a whole year you were not able to get up there?

Col. STEARNS. That is true.

Mr. FREAR. I guess that is all.

Mr. LEA. I would like to get the expense account of that railroad and a statement as to the expenses.

Col. STEARNS. I can get that.

Mr. FREAR. Whatever data is wanted that we do not have here we would like to get in order to have correct information, and if it would take up your time in getting it down here for us you can furnish it later.

Mr. MAGEE. Under this Erickson contract were operations being continued?

Col. STEARNS. Only until those logs on the right of way were removed.

Mr. MAGEE. I mean the taking of lumber from his run or land controlled by him and getting it toward the market by the use of this Government railroad extending from Lake Crescent to Lake Pleasant—

Col. STEARNS. That can be canceled at any time.

Mr. MAGEE. Just wait a moment. I would respectfully request that you listen to my question, and I do not ask these question without purpose, and they are solely for information, and then answer the question one way or the other; yes or no, or say you can not answer it, and then we will get along rapidly here and save a great deal of time. Now the question I put, and I will repeat it, is whether operations are being now continued under this Erickson contract. if you know?

Col. STEARNS. Are being continued now, or will be in the future?

Mr. MAGEE. Or now?

Col. STEARNS. They are going on now, yes sir.

Mr. MAGEE. As I understood you to testify, you said that this contract received the approval of the board of directors—

Col. STEARNS. No sir, I did not.

Mr. MAGEE. (continuing) of the corporation?

Col. STEARNS. I said I was not sure whether that contract had been or not.

Mr. MAGEE. Who did authorize this contract?

Col. STEARNS. I did, sir.

Mr. MAGEE. And you do not know whether you submitted the proposition to the board of directors or not?

Col. STEARNS. They were informed about the contract, but whether it was read to them—

Mr. MAGEE. Will you answer this, please, Colonel; whether you know whether you submitted this contract to the board of directors of the United States Spruce Production Corporation?

Col. STEARNS. I am not sure of that, whether I did or not.

Mr. MAGEE. In authorizing this contract did you get the opinion of a competent attorney as to your authority, or the authority of the corporation, to enter into such a contract?

Col. STEARNS. No, sir.

Mr. MAGEE. I would respectfully suggest that, for your own protection as well as for the protection of other parties that may be interested, that before proceeding with this contract you get the opinion of a competent attorney as to the authority of either yourself or the corporation to enter into it. From the information at hand I am strongly of the opinion that such authority does not exist, either in you or in the corporation.

(Thereupon, at 12.25 p. m., a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

The committee met, pursuant to the taking of recess, at 2 o'clock p. m.

TESTIMONY OF LIEUT. COL. CUTHBERT POWELL STEARNS— Continued.

Mr. FREAR. Colonel, I am just going to ask you a question concerning which it is not very material whether you have information, but it is for the purpose of putting some testimony in the record. You are familiar with the Ray Investigation that was held out here?

Col. STEARNS. No, sir; only the result of it.

Mr. FREAR. Yes, only the result. Well, it is not very important, but I wish to read from allegation No. 5 taken from set five of the Ray Report, which was handed to me by the War Department, and a brief statement in connection with it. The allegation made by the Howes telegram, which was sent, as you may know, by an intelligent officer of the Army, a major, to the Department was to the effect—I will read this part of the allegation, referring to the Kerbaugh road:

This road, according to Kerbaugh, has cost about \$12,000,000 and taps no spruce until it travels over 40 miles, which brings it into the holdings of Laceys and the Milwaukee Land Co.

That is just a part of the telegram that he sent. Based on the entire telegram the War Department ordered an investigation, and Maj. Ray conducted that investigation. Referring to this allegation which I have just read his finding is, as he says: "Substantially true, but of no significance."

This statement of cost, according to Lieut. Kerrigan, is based upon a statement made by Mr. Kerbaugh to a manager of the Washington Hotel, Seattle. The road actually cost about \$3,800,000. The same contractor, however, spent at least \$3,500,000 more in other Government operations in the same county. Had the work gone on they probably would have spent more than \$25,000,000. However, the statement has no significance.

The statement that the road taps no spruce until it travels 40 miles is practically true. This railroad is 38 miles long and connects the main line of the Milwaukee Railroad with a large stand of spruce near Lake Pleasant. No one denies this allegation, but the decision to build this road was carefully considered and arrived at as the most feasible method of bringing out 300,000,000 feet of desirable spruce.

He then quotes exhibits, etc.

He then continues:

No one questions the value of this stand of spruce and the desirability of tapping it. The only question here is whether or not the judgment of the Government officials in the actual location of the railroad to reach this spruce was justified. In this connection, Gen. Disque states as follows.

It is for the purpose of getting his statement into the record that I read it at this time.

We had Mr. Roberts of the Union Pacific go over that (the decision as to the most feasible route), and Mr. Caliber, who laid out the Canadian Pacific, go over it, and had Maj. Welch (the S. P. D. chief engineer), and I personally have gone over all the routes up there in Clallam County. The Siems-Carey contract to build the railroad was closed in Washington with the provision that the exact route would be determined by me before they began operations, because, in Washington, Mr. Byron, president of the Milwaukee, put a doubt in my mind as to the advisability of going ahead the way we had planned before we went to Washington, so we left it open and came out here again and went over those lines and then had a meeting in Seattle, attended by Mr. Erling, of the Milwaukee, and his chief engineer, Mr. Roberts, chief engineer of the Union Pacific. Mr. Caliber, who had located the Canadian Pacific, another man who was superintendent of the Milwaukee, Mr. Carey, and myself.

Who was the superintendent of the Milwaukee, do you know, of whom he speaks?

Col. STEARNS. I do not know of whom he speaks.

Mr. FREAR. Then he says:

We spent the evening listening to the different arguments and then I decided to build it via Lake Pleasant, and that decision was concurred in by every one present.

In allegation No. 7 there is a brief statement that I wish to insert: that is, in reference to the charge made in the Howes telegram, which he puts first, and then the explanation.

The allegation is:

Siems-Carey, Kerbaugh built \$2,000,000 mill at Port Angeles, Wash., while lumbermen contend it was unnecessary and useless without building of \$1,000,000 breakwater on sound. No spruce yet milled from this project * * *.

Also built mill at other end of railroad costing about \$1,000,000, and no spruce has been milled from this.

These two mills were built on cost-plus contracts at Government expense * * *. (Excerpt from Howes's telegram.)

They were built, as I understand it, under that \$25,000,000 spruce production contract. His finding is:

Statements only partially correct; inference unfounded.

These mills were being built by the contractor at his own expense and not at Government expense, as claimed. The contractor therefore had a perfect right to locate them any place he saw fit, as they would be his property. However, there was a cancellation provision in the contract which provided that if the contractor was not permitted to finish his contract, that is, to deliver 250,000,000 feet of lumber, the Government would reimburse him for all of his expenditures, plus 7 per cent, and take over the properties and equipment.

The result of this was that when the armistice was signed these mills became the property of the Government.

The statement that these mills produced no spruce up to the signing of the armistice has no significance, as it wasn't anticipated that they would produce any spruce until late December. All of the operations were up to schedule when the work was stopped.

In this connection he continues:

In this connection, Mr. John D. Ryan states as follows, in Exhibit F: "As to whether the mill built at Port Angeles, Wash., by Siems-Carey Co. under their contract with the Government was unnecessary and useless, competent persons should investigate and report. My own opinion is that it was absolutely necessary, and had to be done if we were to get the spruce that would have been required if the war had not ended as early as it did. One of the largest sawmills in the world is located at Port Angeles, and Siems-Carey tried to buy it, but could not do so at a reasonable price."

Do you know anything about the facts?

Col. STEARNS. No, sir.

Mr. FREAR. Then he continues:

No spruce has been produced from any of these operations, as it was all dependent on the building of the railroad, which was completed about the time of the signing of the armistice.

Allegation No. 8 reads from the Howes telegram:

And (mills) are so located in conjunction with the railroads which have been built, these men will be able to control lumber industry, and Carey contends they are in the game to stay * * *. (Excerpt from Howes's telegram.)

Finding: Of no significance from the Government standpoint.

The Siems, Carey-H. S. Kerbaugh contract for spruce gave them the option of buying up these operations at an appraised value within 30 days after the work stopped.

The 30 days have expired, and they have not taken advantage of this option. These properties will now be disposed of, after public advertising and bidding, open to all.

See also Mr. Ryan's letter, Exhibit F, page 3, which reads in part as follows:

This is an extract from Ryan's letter:

The continuing in the lumber business was, I believe, the chief incentive in their making the contract, and never disguised, as far as I know.

The Siems-Carey-H. S. Kerbaugh Co. having failed to take advantage of their option to retain these properties, the properties are now to be disposed of only after public advertising and bidding open to everyone.

There is one more allegation, allegation No. 10, taken from the Howes telegram:

Preliminary investigation indicates that railroads are attempting to dominate lumber industry of Northwest at Government expense and in collusion with Government officials and Army officers. Indications of huge graft in large transactions. The continued investigation of which will involve large people and calls for commission of great power. Any further work we might do at present might jeopardize the larger investigation which will be necessary to prove these contentions. This situation very serious and calls for careful consideration. Wire instructions at once. Time important factor.

That was contained in the Howes telegram sent to Washington by this intelligence officer who had made the investigation upon which Ray passes. He says:

Finding: Unfounded and absurd. Maj. Howes and Lieut. Kerrigan were unable to produce any evidence to substantiate the above. See Kerrigan testimony, page 15, Exhibit "C." No one else has made any specific charge of dishonesty on the part of Government officials or Army officers.

The examination of Lieut. Kerrigan on this is in part as follows. (He fails to support the statement in his telegram and his testimony illustrates the haphazard way in which he and his associates jumped at conclusions.)

He quotes now from the testimony:

"Maj. RAY. Now, to return to the telegram. 'Preliminary investigation indicates that railroads are attempting to dominate lumber industry in Northwest at Government expense and in collusion with Government officials and Army officers. Indications of huge graft in large transactions.' Upon what is the statement based that investigation indicates that railroads are attempting to dominate the lumber industry?"

"Lieut. KERRIGAN. If the contentions of my informants are correct, the C., M. & St. P. would appear to be heavily interested in the route of the new road across the Olympia Peninsula, and we would undoubtedly assume that inasmuch as timber is the only product of that locality that the railroad must be extensively interested in it. In the Oregon district, the reports on file in our office would make it appear that one or two of the extensions which have been built would make valuable acquisitions to the Southern Pacific holdings."

"Q. Assuming that the railroads did take over these extensions, would they not then become common carriers, which would be open to all operators in their districts?—A. I am not prepared to answer that."

"Q. Was this question discussed by any of your informants?—A. No."

"Q. To dominate the lumber industry at Government expense, the telegram reads, 'in collusion with Government officials and Army officers'—will you please state upon what that part of the telegram is based?—A. If the first part of the contentions are correct, viz, that these roads were built for the benefit of railroad interests, we must naturally assume that the Army officers who directed and recommended the course of these roads were in collusion with the corporations that were to be benefited."

No one denies that the opening up of this new lumber territory will eventually bring more business to the railroad. Further, the natural buyer for the Clallam County railroad in question is the Milwaukee Railroad. The buyer of this property will undoubtedly buy it at 50 per cent or less of the cost to the Government, due to high cost of materials and labor during the war.

No evidence has been offered to substantiate in any way the statement made, that there was collusion on the part of officials to bring this about.

Mr. FREAR. That is all that I care to read and that puts it in the record.

Mr. LEA. Have we got the Howe's telegram any place in the record in full?

Mr. FREAR. Yes; we have it in the record, taken by Mr. Baker, but I can give you a copy of it here.

Mr. LEA. As long as it is in, in part, I suggest that it would be better to have it in the record in full for reference purposes. As

long as it is in it is all right. I wasn't sure whether it was in in full or not.

Mr. FREAR. I just wanted to put it in the record, that was the only purpose.

Mr. LEA. Colonel, there are a few questions to which I would like to get a brief reply. In the first place, the Siems-Carey logging contract; that is, the date for delivery of logs had not arrived at the time the armistice was signed, isn't that the fact?

Col. STEARNS. Let me look at the date on that. (Witness examines document). That is a fact, yes, sir.

Mr. LEA. When were the other cost plus contracts entered into, can you recall?

Col. STEARNS. The other cost plus contracts were entered into in the early spring, in the early part of 1918. Most of them started as riving contracts.

Mr. LEA. But as a logging proposition to what extent had they kept up with their program, if there was a program?

Col. STEARNS. They had logs down in the woods ready to bring out as soon as the railroads run to their destinations.

Mr. LEA. The figures that you gave this morning on production does not include logs in the timber then?

Col. STEARNS. No sir.

Mr. LEA. What was the name of the comptroller who made out the estimates that was placed in evidence this morning?

Col. STEARNS. Major C. C. Campbell.

Mr. LEA. Was he also the District Manager of Finance?

Col. STEARNS. Yes sir.

Mr. LEA. With an office located at Portland?

Col. STEARNS. Yes sir.

Mr. LEA. Did you have anything to do with negotiating the sale to England?

Col. STEARNS. No, sir.

Mr. LEA. That was not part of your duties at that time?

Col. STEARNS. No sir.

Mr. LEA. Now, is there evidence available at Portland to show the communications that passed between the Spruce Production Corporation and the English Government in negotiating that settlement?

Col. STEARNS. Not between our corporation—I do not know of any between our corporation and the English Government.

Mr. LEA. Communications between the Spruce Production Corporation and Washington?

Col. STEARNS. And Washington, yes sir.

Mr. LEA. That will contain the representations—

Col. STEARNS. There were some wires on that point, and in our first reply we stated to the effect that—

Mr. LEA. Well, if you can produce those when we get to Portland I think that will be more satisfactory.

Col. STEARNS. Will you make a note of that, Mr. Walker?

Mr. LEA. I understand the facts to be somewhat different from what you stated them this morning in reference to the settlement with Italy and France, and I would like to get this clear in the record. As I understand it, England made a proposition that be

would settle on an estimate and remove herself from any doubt as to what the actual value of the salvage would be.

Col. STEARNS. That is true, as I understand it, sir.

Mr. LEA. Now, do you know of any misrepresentation or deception that was practiced with England in reference to that?

Col. STEARNS. No sir, absolutely none.

Mr. LEA. As I understand this, as to France and Italy they are indicating a desire to wait until the salvage value is realized and settle on a basis of actual results instead of an estimate, is that true?

Col. STEARNS. I know they are waiting. Whether they are waiting for that I am not in a position to say, but they held off longer than Great Britain. I stated simply what was my opinion when I stated that probably they would settle on the same basis.

Mr. LEA. Who is the intermediary between the Spruce Division and the allies in making settlements?

Col. STEARNS. The Finance Division in Washington, the Finance Division of the Air Service.

Mr. LEA. Then the Finance Division at Portland is subordinate to the Finance Division at Washington?

Col. STEARNS. Yes, sir; in that respect.

Mr. LEA. As I understand it, part of these soldiers that were provided for the Spruce Production Corporation were assigned to work in private mills, were they not?

Col. STEARNS. Yes sir.

Mr. LEA. And was that true of mills that performed work for commercial purposes as well as for the Government?

Col. STEARNS. Practically all the mills had some commercial work in addition to their Governmental work.

Mr. LEA. Were there any mills devoted solely to the production of spruce outside of Government mills?

Col. STEARNS. None that were devoted solely to that, that I can recall.

Mr. LEA. In reference to the Erickson contract, what, if anything, does Erickson pay for transporting his logs over the Government railroad?

Col. STEARNS. Let me get those figures.

Mr. LEA. I simply want to know, does he pay so much a thousand for transporting them?

Col. STEARNS. Yes, sir.

Mr. LEA. How much?

Col. STEARNS. That is what I want to get at, the amount per 1,000 paid for transporting logs. It was 50 cents a thousand.

Mr. LEA. But no such payment is required of Government owned logs, I suppose?

Col. STEARNS. No, sir. He is removing those under contract.

Mr. LEA. Now, on what terms was the use of the railroad, the other railroad, permitted by private parties at the present time. You spoke of a railroad some place south that is leased to a private party. Now, on what terms?

Col. STEARNS. The amount they are getting?

Mr. LEA. Yes.

Col. STEARNS. A minimum of \$700 a month.

Mr. LEA. What is the extent of that operation?

Col. STEARNS. That is a logging operation where they are opening up new timber tracts upon the Nemah River.

Mr. LEA. How long is the Government railroad that is used by this lessee?

Col. STEARNS. We have the right of cancellation of those in 30 days.

Mr. LEA. But what I meant was, how long is the right of way that the lessee uses?

Col. STEARNS. About 7 miles, approximately.

Mr. LEA. That is near enough. What was the reason for permitting Erickson to use the Government road for transporting private logs?

Col. STEARNS. His private logs?

Mr. LEA. Yes.

Col. STEARNS. It was part compensation for his services, and included in the contract. The main idea of the contract was to get those logs out of the right of way.

Mr. LEA. Well, I mean in reference to his private logs; why was the right given him to transport his logs acquired from other sources? I simply want an explanation of the facts.

Col. STEARNS. As I say, that was part of his compensation, a request on his part to go into the tract, and it was acceded to by the corporation under the circumstances. I can give you the whole history of that.

Mr. LEA. I do not want that. Isn't the fact simply this, that he owned a small body of private logs in immediate contact with the Government right of way?

Col. STEARNS. That is true, yes.

Mr. LEA. And in going upon the Government right-of-way and removing its logs he desired to remove a small quantity of his own logs?

Col. STEARNS. That is true, yes.

Mr. LEA. That is all, I think.

Mr. MAGEE. Just a question there. If you gave him this right there would be no reason for denying the right to any other applicant, would there?

Col. STEARNS. No, sir.

Mr. MAGEE. And if the right was generally exercised——

Col. STEARNS. Unless it became too generally exercised.

Mr. MAGEE. If too generally exercised it might result in great damage to other property holdings in that locality and also might destroy the forests if the Government desired an extension of the forest preserve, perhaps, to take in these lands and preserve them for the benefit of the country. That is right, isn't it?

Col. STEARNS. Yes, sir.

Mr. MAGEE. It was in view of those propositions that I called your attention to the question of authority. In other words, it seemed to me that the question to the State of Washington and the country at large was important enough that the Government should determine the policy rather than to have the policy determined here. That was the point in my mind.

Col. STEARNS. Yes.

MR. MAGEE. It has been suggested, do you know whether Mr. Erickson bought this land upon which he has been shipping the logs over this railroad of the Government since the building of the railroad?

COL. STEARNS. I do not know definitely on that point, sir.

MR. MAGEE. Have you any understanding about it, Colonel, or do you know anything about it?

COL. STEARNS. No, sir; I do not know anything about it.

MR. MAGEE. That is all.

MR. FREAR. That is all.

MR. LEA. That is all.

(Witness excused.)

TESTIMONY OF MR. JOHN E. FROST.

(The witness was sworn by Mr. Frear.)

MR. FREAR. Your full name, Mr. Frost.

MR. FROST. John E. Frost.

MR. FREAR. And where do you live?

MR. FROST. I live in Seattle.

MR. FREAR. What is your business?

MR. FROST. Logger.

MR. FREAR. How long have you lived here in Seattle?

MR. FROST. I have lived in the State of Washington a little more than thirty years; in Seattle, going on seven.

MR. FREAR. What has been your business since you came to the State of Washington?

MR. FROST. I have been engaged in the practice of law, in the construction of irrigating canals and ditches, in the public service for a short time; for the last seven years, in logging.

MR. FREAR. You are in the logging business at the present time?

MR. FROST. In the logging business at the present time.

MR. FREAR. You know the conditions which were developed in this part of the State during the period of the war, you are familiar with them?

MR. FROST. Yes; I think so.

MR. FREAR. You have heard some of the testimony, have you, that has been given here before the committee, in regard to the Siems-Carey-Kerbaugh road?

MR. FROST. No, sir; very little of it; not enough to be at all familiar with it.

MR. FREAR. Well, briefly, you are familiar with the road itself, you know where it lies?

MR. FROST. I know where the road lies, am familiar with the country.

MR. FREAR. You are familiar with that country over there?

MR. FROST. Yes, very familiar with it.

MR. FREAR. Whereabouts do you log?

MR. FROST. I log at the present time about 40 miles east of Seattle, on the Milwaukee.

MR. FREAR. Have you ever logged over in that part of the country?

MR. FROST. No, sir.

MR. FREAR. Have you ever been engaged in any kind of business over in that part of the country, that is, over on the peninsula?

Mr. FROST. Well, I had occasion to make some very thorough investigations concerning the character and topography of that country, and the kind, character, and quality of the timber there.

Mr. FREAR. What was the occasion of that?

Mr. FROST. Well, I was employed as special counsel for Clallam County.

Mr. FREAR. For the county?

Mr. FROST. For the county of Clallam, in the defense of certain suits that were brought to set aside certain taxes imposed upon large tracts of timber in the west end of Clallam County.

Mr. FREAR. Who brought the suits?

Mr. FROST. The suits were brought by J. D. Lacey & Co.—well, I beg pardon—they were brought by what is known as the Lacey holdings, by the Clallam Lumber Co. and Ruddock & McCarty.

Mr. FREAR. The Clallam Lumber Co. has probably the largest holdings in the county, has it not?

Mr. FROST. Yes; they are known as the Lacey holdings.

Mr. FREAR. When was that, that you had your investigations?

Mr. FROST. I think I—I spent a good deal of time in that timber in that locality, I think early in 1915, and I had a number of cruisers in there for a long time.

Mr. FREAR. State, briefly, just what you did, so that the committee will know about your information.

Mr. FROST. We made a very careful examination of the timber and of the ways and means to get it out of the Solduc and Calawah River basins.

Mr. FREAR. To be used as a basis for taxation purposes?

Mr. FROST. I might say that one of the strong allegations by the plaintiffs in this suit that was brought was to the effect that the timber had no market value, because it was inaccessible and could not be put in the market, and, desiring to show that the timber could be reached in a convenient proper way, we made investigations as to the best method of removing that timber, and, as a matter of fact, I had a party of engineers in the field, who made a survey, located a road from the mouth of the Pysht to what is generally called Lake Pleasant. I believe.

Mr. FREAR. Let me get that in the record clearly. The mouth of the Pysht is about 5 miles west of Deep Creek—5 or 6 miles, or what distance?

Mr. FROST. Yes; I should say 5 or 6 miles west of Deep Creek.

Mr. FREAR. And Pleasant Lake is what is shown on the map as Lake Tyee.

Mr. FROST. Lake Tyee.

Mr. FREAR. That is situated near to this large body of spruce that has been spoken of in the testimony?

Mr. FROST. Yes. We had, as I say, these surveys made. Careful estimates made of the cost of the building of the road. I personally went over the route, I think I was over it twice or three times, and after having had the surveys made, we discovered, by accident, that Mr. R. H. Thomson, a member of the city council of Seattle and formerly city engineer of this city, had, sometime before that, surveyed or made several surveys through there, and made a written report upon the cost of building a road from the mouth of the Pysht into

this big body of timber that lies in the valleys of the Solduc and Calawah Rivers, and we used his report that he had made several years before, and had him as a witness upon the witness stand, to testify as to the cost of building a road in there.

Mr. FREAR. That is, the county used his report?

Mr. FROST. Yes.

Mr. FREAR. In its—

Mr. FROST. We used his testimony in—

Mr. FREAR. In the action that was held at that time. You were familiar with this route as well?

Mr. FROST. Yes, sir. I investigated it personally, went over it a number of times personally.

Mr. FREAR. And for the purpose of inspecting, I assume, at that time—that is, inspecting for information in this suit that was on?

Mr. FROST. For the purpose of inspecting it and determining in my own mind its feasibility and probable cost.

Mr. FREAR. Mr. Thomson is here in the city, I presume?

Mr. FROST. I presume so.

Mr. FREAR. He made a report to you, substantially the report that is contained here in the bill of exceptions, is it?

Mr. FROST. His testimony—his sworn testimony is contained in this record.

Mr. FREAR. Unless there will be some point made about it—we can call him, if it is necessary, for cross-examination—it is a brief statement, isn't it—

Mr. FROST. Yes.

Mr. FREAR (continuing). In regard to the road. And you might, if you will, read from that his sworn statement that went to the Supreme Court, I take it.

Mr. LEA. Well, suppose, if you want to offer it later, you give me a chance to look over it and see whether or not we require Mr. Thomson to be here.

Mr. FREAR. Just hand it to Mr. Lea—that part you were going to read.

(The record referred to was handed to Mr. Lea by Mr. Frost.)

Mr. FROST. I might say that Mr. Thomson's testimony will be found, beginning on page 301, the testimony of Engineer Remp on 400, and I think Engineer Walker is on 394.

Mr. FREAR. Who was Mr. Remp?

Mr. FROST. Mr. Remp was the engineer that we employed to make the surveys.

Mr. FREAR. The engineer employed by the county?

Mr. FROST. Yes. Mr. Walker was another engineer employed.

Mr. LEA. You purpose reading the statements of the three men mentioned, or just this one?

Mr. FREAR. Well, we can offer that and then you can see whether there is any materiality. I think one or two is sufficient there, unless it covers some other river. These all relate to this one route up the Pysht River, do they?

Mr. FROST. They were all relating, as I recall it, to the route up the Pysht River, but Mr. Thomson's survey was one that was made a number of years before this time. The surveys made by Mr. Remp and Mr. Walker were made at my instance.

Mr. FREAR. Oh, I see. (Mr. Lea examining court record.)

Mr. LEA. I think it would be satisfactory to let this go in the record, and, if we deem it desirable to have the witness here, that he could be called later.

Mr. FREAR. Certainly. I didn't know whether he was accessible.

Mr. LEA. I will consent to the reporter putting it right in.

Mr. FREAR. I thought he might read it, because it is information. I haven't gone over it myself, excepting as it was just handed me a moment ago. So that we will have an understanding of the general character of it.

Mr. FROST. This testimony was taken in the trial of the suit of the Clallam Lumber Co., a corporation, plaintiff, and Ruddock and McCarthy, plaintiffs, against Clallam County, State of Washington, before Judge Cushman, in the United States District Court of the Western District of Washington.

"R. H. Thompson, witness on behalf of the defendants, being sworn, testified substantially as follows:"

Mr. FREAR. Just read.

Mr. FROST. I might say that this is the record on the appeal of these suits to the United States Circuit Court of Appeals, and that both cases were consolidated and tried as one case.

Mr. FREAR. Just read his testimony, so far as it relates to that Pysht River route, please.

Mr. FROST. Mr. Thompson testifies:

I found the possibility of building a road on several different rates of grade depended on the cost per mile which the parties might be willing to expend. I reported to the company for whom I did the work on two routes, one of which was to have a maximum grade of 2 per cent, and the other which was to have a maximum of 3 per cent. The following is a general course of the road. The mouth of the Pysht River is in section 10, township 31 north, range 11 west. In a line which I had planned I made the same cut-off that is shown on this map in the green line.

Mr. FREAR. What was that cut-off, briefly?

Mr. FROST (referring to Remp's map, exhibit 25). That was a short cut-off from the mouth of the Pysht, instead of following the course of the river, I think. I haven't the map. I have the map, if you desire it.

Mr. FREAR. I wanted to make it intelligible what it meant by the cut-off. It was a cut-off across what?

Mr. FROST. Across the flats near the mouth of the Pysht River.

Mr. FREAR. Oh, yes.

Mr. FROST (continuing reading):

Through section 10, going to the section line on a course to the west side of the river, and followed on the west side of the river for about two miles and then followed up along near the east margin of section 17, and then cut across and came toward the south branch of the Fork and continued up some distance on the south branch of the Fork through section 29, coming up to the summit—

this reads "and," but it should be "of"—

the summit of the Pysht River, in section 35, township 31, range 12, and then from there I followed down Beaver Creek practically as shown in this green line on this map into section 29. This line was 21 miles in length and had a maximum grade of 2 per cent. I took another line which had a considerable amount of 3 per cent on the Pysht River. I followed into sections 9 and 8 and into section 7, and then crossed the river and followed very close into the green line which is shown, which crosses into section 13 and into section 24, and through to the Solduc River, with a grade of 3 per cent.

Three per cent grade is not a difficult grade for logging purposes with a geared engine. From the summit of the Pysht River down to the Solduc River I planned making a short section of $1\frac{1}{2}$ per cent grade, just after crossing the summit coming down toward Beaver Lake, but the long detour would reduce that to less than 1 per cent. This road would be about 17 miles. The cost of these roads—

Mr. FREAR. That is, 17 miles from where?

Mr. FROST. Seventeen miles from where he started, the mouth of the Pysht.

Mr. FREAR. Up to this lake?

Mr. FROST. To the Solduc River.

Mr. FREAR. To the Solduc River.

Mr. FROST. Which was right near the lake. (Continuing reading):

The cost of these roads would be, of the 21-mile road, \$320,000; of the 16 $\frac{1}{2}$ -mile road, \$210,000. The witness says that his estimate was for the year 1891. If he were building the road to-day he would not hesitate to use a 16 or 18 degree curvature as against a 12-degree curvature in the original estimate—

Mr. FREAR. That is, explain to the committee what that means, the difference between the degrees of the curvature—I think we understand, but to make sure—between a 12 and 16 curvature.

Mr. FROST. Twelve or 16, or 12 and 18, it means using a much sharper curve, shorter curve, sharper curve.

Mr. FREAR. Yes.

Mr. FROST. I will read that again:

If he were building the road to-day he would not hesitate to use a 16 or 18 degree curvature as against a 12-degree curvature in the original estimate as against a 12-degree curvature and a grade of 5 to 6 per cent, which would make the road cost now \$9,500 per mile as against over \$12,000 per mile for the 3 per cent grade, and over \$16,000 for the 2 per cent grade of the road as then contemplated.

Mr. FREAR. Is that the end of it?

Mr. FROST. That is the end of his direct testimony. Then here is considerable—

Mr. FREAR. When was that testimony given?

Mr. FROST. That testimony was given in the fall of 1915.

Mr. FREAR. 1915?

Mr. FROST. Yes.

Mr. FREAR. Can you give substantially the increase in the cost of building from 1915 to the year 1918? That is, you have built other roads, have you, or had connection with the building of other roads?

Mr. FROST. Yes, sir; I am constantly building railroads.

Mr. FREAR. Just give the committee——

Mr. FROST. That is, logging roads.

Mr. FREAR. Yes.

Mr. FROST. The cost in my own work in 1918, compared with 1915, increased 123 per cent.

Mr. FREAR. 123 per cent?

Mr. FROST. Yes.

Mr. FREAR. And that would make substantially what, in these figures that you have given, as nearly as you can determine, what rate per mile?

Mr. FROST. That would make the cost, on Mr. Thomson's estimate, \$21,375 per mile.

Mr. FREAR. Of which road would that be, now?

Mr. FROST. That is the present cost of 1915.

Mr. FREAR. Of which branch? There is one branch that he had there.

Mr. FROST. That was the logging road, short branch.

Mr. FREAR. That is the 17-mile road?

Mr. FROST. Yes.

Mr. FREAR. \$21,375 per mile, in 1918?

Mr. FROST. Yes, sir; that would be according to my——

Mr. LEA. 1918 or 1915?

Mr. FROST. That is 1918 as compared with 1915. I have just testified that the increased cost to me, in my own operation, in 1918 my cost had increased 123 per cent over my cost of 1915, and, taking Mr. Thomson's estimate of \$9,500 per mile, and figuring that other railroads would increase 123 per cent in the cost of construction, it would make his estimate, as given here, \$21,375 per mile.

Mr. FREAR. You were building roads in 1918?

Mr. FROST. Yes, sir.

Mr. FREAR. Whereabouts?

Mr. FROST. In King County, State of Washington.

Mr. FREAR. Will you make an estimate, please, Mr. Frost, of the comparative cost per mile on the——what was the 21-mile road, that is the lower——

Mr. FROST. Yes, 21 miles.

Mr. FREAR. A lower or lesser grade.

Mr. FROST. It will be necessary to do some figuring here.

Mr. FREAR. Take time. We have lots of time.

Mr. FROST. The 21-mile road he said would cost \$320,000. (Witness figuring). That would make the cost of the 21-mile road increasing at 123 per cent, \$693,600.

Mr. FREAR. What would it be per mile?

Mr. FROST. Well, I will have to make another division here (figuring). Just a trifle over \$33,000.

Mr. FREAR. The reason for the higher cost on the lower grades would be due to what?

Mr. FROST. To more difficult construction—very much more difficult.

Mr. FREAR. That is, to more difficult excavations, cuttings, bridges, etc.

Mr. FROST. Yes.

Mr. FREAR. That would come with increased construction for the purpose of getting a reduced grade?

Mr. FROST. Yes.

Mr. FREAR. But without going into difficult construction, on the 17-mile basis, the cost would have been \$363,375, or approximately that, at the rate of \$21,375 a mile; is that right?

Mr. FROST. I think so; yes. I have not followed your figures.

Mr. FREAR. You have furnished some figures here, giving brief data of the separate items of increase which go to make up the total of 123 per cent increase, and I ask as to the statement on the margin "the 123 per cent"—you say "increase is inclusive of freight"—I can read part of the shorthand, but I can't get all of it.

Mr. FROST. That is not mine. It is something I dictated to the stenographer.

Mr. FREAR. I can read part of it.

Mr. FROST. I can't read the shorthand there.

Mr. FREAR. I want to get what is included in 123 per cent. It includes—

Mr. FROST. The increase.

Mr. FREAR. Yes.

Mr. FROST. The per cent of increase of cost in my operations.

Mr. FREAR. I want that to be entered in the record—not the items, but what does it include? It gives on the margin there what it includes, that you dictated.

Mr. FROST. This increase includes increased freight, increased overhead expenses.

Mr. FREAR. All expenses incidental to the building of the road?

Mr. FROST. All expenses incidental to the building of the road.

Mr. FREAR. At Pysht there is a harbor?

Mr. FROST. Well—

Mr. FREAR. Where logging operations are carried on?

Mr. FROST. Yes, sir.

Mr. FREAR. Has been for how many years?

Mr. FROST. Oh, I think Merrill & Ring opened up there about 1915, about four years ago.

Mr. FREAR. What have you to say as to their being large or small operators—loggers.

Mr. FROST. Merrill & Ring?

Mr. FREAR. Yes.

Mr. FROST. I think, when we consider their operations at Gray-Harbor, in connection with the Polson Logging Co., their operations in Clallam, and their British Columbia operations, they are probably the largest loggers in the world.

Mr. FREAR. The largest loggers in the world?

Mr. FROST. I think so.

Mr. FREAR. They use Pysht Harbor here—that is in your judgment—and they send the logs from where to what point, for sawing purposes?

Mr. FROST. Well, they tow their logs from the mouth of the Pysht. I presume, to all of the mills who happen to be customers, in the Puget Sound district.

Mr. FREAR. The practice is to send logs to the different mills according to what contracts can be made, and they deal with separate mills where they don't own their own manufacturing establishment?

Mr. FROST. If I may explain, rather than answer the question directly?

Mr. FREAR. Yes.

Mr. FROST. The logging business in the Pacific Northwest, and particularly in the Puget Sound district, is, as a rule, distinct and separate from the lumber manufacturing industry. The loggers, as a rule, buy, own, and hold the timber, remove the timber, cut it into logs, and market the logs. In other words, in the Pacific Northwest we have the unique distinction, perhaps, of being the only section of the country where logs are a commodity in the market the same as wheat or potatoes or something else, and logs are sold in competition, that is, by the independent loggers in competition with each other, and we sell them wherever we can find a desirable customer and a good price.

Mr. FREAR. That little slip on which he made the computation—that pencil computation—it just gives the items. [Handing slip referred to to Mr. Lea.] I will just offer that—place that in the record.

(Slip of paper referred to was marked Exhibit I, Frost, August 21, 1919, and is as follows:)

1918. Increase since 1915.

Falling, bucking, 144 per cent, or 2.44 times $\frac{119\frac{1}{2}}{121.00}$

Yarding, loading, 1.30 per cent, or 2.3 times.

Railroad maintenance and operation, 218 per cent, or 3.18 times.

Railroad construction, 123 per cent, or 2.23 times.

Wire rope, 169 per cent, or 2.69 times.

Tools, etc., 81 per cent, or 1.81 times.

Fuel, oil, etc., 171 per cent, or 2.71 times.

General increase, 123 per cent, or 2.23 times.

(The above slip of paper is indorsed on the margin as follows:)

The 123 per cent general increase is inclusive of freight, stumpage taxes, overhead, etc., which are not shown in detail.

(The words "general increase is inclusive of * * * stumpage taxes * * * etc.," in the above marginal indorsement are written in shorthand.)

Mr. FREAR. Will you read from whatever you have there in regard to this same right-of-way? This is the statement of another engineer, is it?

Mr. FROST. Yes.

Mr. FREAR. What engineer is this?

Mr. FROST. S. A. Walker.

Mr. FREAR. Who was he?

Mr. FROST. Well, I will read his testimony; that explains.

Mr. FREAR. All right. That has been taken in the same proceeding?

Mr. FROST. In the same proceeding, and I think on the same day, as I recall.

Mr. FREAR. And he appeared for the county?

Mr. FROST. Yes. [Witness reading:]

S. A. Walker, a witness, sworn on behalf of the defendants, testified as follows:

Mr. LEA. I am willing that this should go in without reading.

Mr. FREAR. I haven't seen it. That is the reason.

Mr. LEA. I am perfectly willing for it to go in evidence. Read it.

Mr. FROST. (Reading:)

He is a civil engineer of 14 years' experience; has had experience surveying, laying out, and constructing logging roads—4 years' experience at this. During this 14 years he has been employed by the Northern Pacific Railroad Co., the Milwaukee Railway, the Copper River & Northwestern, and the Spokane & International; has been employed by the Merrill & Ring Lumber Co.

Witness made an examination for a route of a railway from the lands of the plaintiff in the interior to the Pysht River across Beaver Pass; thinks that a grade of 2 per cent from the summit to the Pysht River, in a distance of 11 miles can be obtained, found no unusual conditions or obstructions that would make the railroad costly; made no detailed estimate of the cost of constructing such a railroad, but in his opinion, the cost would be \$5,000 for the subgrade, and \$6,000 above it as the higher cost, or \$11,000 a mile, using 60-pound steel. From the summit down the Solduc River witness believes he could get a grade of one per cent from the summit to Sapho. Sapho is a post-office near the Solduc in the heart of the interior lands. He estimates the cost of such a road from the Pyst or Clallam Bay to the Solduc and the heart of the territory marked in bright red on the map—

Mr. FREAR. Where is that, this spruce district?

Mr. FROST. That is the big level country that lies in the Solduc and Calawah River basins, right near—Pleasant Lake is about the heart of it.

Mr. FREAR. Oh, yes.

Mr. FROST. He estimates the cost of such a road:

The 11 miles from the Pysht River to the summit, and 7 miles to the cross-road, or 18 miles, at \$11,000 a mile, or \$191,000. The maximum curvature on the road would be 15 degrees, making the road curvature and grade easily and inexpensively operated. Regarding the course and termini of the road, the cost of which he had testified to, the witness said, "The summit here is in the center of the southwest quarter of section 35, and I have followed right down the county road, the side hill near the county road to the quarter corner between sections 26 and 27." The terminus on the north was Pysht and on the south was the summit of section 35, the divide between the Pysht and the Solduc; to make the 18 miles he had figured upon the road would have to go on down to the cross roads, a little below Sapho, east of Lake Pleasant.

Mr. FREAR. How far would that be from Lake Pleasant, if you know from your own knowledge?

Mr. FROST. Oh, my recollection of it is it is perhaps a mile and a half or two miles.

Mr. FREAR. That is the conclusion of his?

Mr. FROST. [Continuing reading:]

The road referred to would hardly be as good a road as a common carrier would use, but would be a good logging road.

That is the close of his testimony.

Mr. FREAR. Now, I was going to ask you—you didn't give the weight of the rails that were going in this first road, this first project that was proposed. Was that stated? This time you gave 60-pound wasn't it?

Mr. FROST. Yes. I have forgotten, but I presume, to the best of my memory, Mr. Thomson figured 60-pound rail.

Mr. FREAR. What is the usual weight for roads of that construction that have to undergo—

Mr. FROST. Fifty-six and sixty.

Mr. FREAR. He says in that last statement, I remember that he went over to Clallam Bay. Did he give you and figures on the Clallam Bay proposition?

Mr. FROST. My recollection is that his statements to me were that there would not be very much difference in cost.

Mr. FREAR. I do not know whether he stated there clearly.

Mr. FROST. No, he said either Pysht Creek or Clallam Bay.

Mr. FREAR. Is Clallam Bay nearer or farther, taking by the Hokko River, to this spruce section? Have you ever been over that, up the Hokko River?

Mr. FROST. Yes; I have been on the head of the Hokko.

Mr. FREAR. And down to Clallam Bay?

Mr. FROST. Yes; a number of times to Clallam Bay.

Mr. FREAR. Do you know the distance, approximately?

Mr. FROST. Oh, approximately.

Mr. FREAR. About how far would it be up to the heart of the spruce?

Mr. FROST. I have not been down the Hokko River to Clallam Bay; I have been the other way.

Mr. FREAR. That would be the natural route, wouldn't it, up the Hokko River from Clallam Bay?

Mr. FROST. The heart of the spruce district is on the head of the Hokko, and on the Dickey River, and I do not consider that Lake Pleasant is in the heart of the spruce belt.

Mr. FREAR. That is in what direction?

Mr. FROST. West and north.

Mr. FREAR. And the Hokko River comes from the north?

Mr. FROST. The Hokko River comes from the south and flows to the north into Clallam Bay.

Mr. FREAR. So that Clallam Bay would be nearer or farther from the spruce than was Lake Pleasant. It is perfectly clear but I want to make it a matter of record without leaving the question.

Mr. FROST. Once into Lake Pleasant you could perhaps reach the spruce a little nearer, that is the heavy spruce stands. But I think from Clallam Bay you could reach the spruce almost as quickly and in as short a distance as you could from Lake Pleasant. There is some spruce in the vicinity of Lake Pleasant, but not a heavy stand.

Mr. FREAR. I want to make it clear that from Clallam Bay is it nearer or farther from the spruce than to Lake Pleasant? Lake Pleasant is farther, in other words?

Mr. FROST. You would reach the spruce from Clallam Bay, I think, nearer by way of the Hokko River than by going by the way of Lake Pleasant.

Mr. FREAR. By what distance?

Mr. FROST. You could get spruce in a short distance from Clallam Bay. Going to Lake Pleasant you don't strike much spruce. I might say that between Clallam Bay and Lake Pleasant is what is known as the Burnt Mountain, and there is a considerable distance in there devoid of timber.

Mr. FREAR. Let me make an explanation of the purpose of the question. Supposing anyone was going to build a road from Clallam Bay to the heart of the spruce, instead of building to Lake Pleasant they would build a much shorter road depending upon the distance of the spruce. How much distance?

Mr. FROST. I think you could get the spruce in perhaps one half the distance as you would in building the other way.

Mr. FREAR. Is there anything further you have there?

Mr. FROST. I have the testimony of Mr. Remp along the same line.

Mr. FREAR. That was not brought down to 1918, but the figures are substantially the same as given before the 123 per cent increase?

Mr. FROST. The increase would be the same. My recollection is that his estimate of the cost of construction was considerably lower than that of Mr. Thomson.

Mr. FREAR. All right. You can read the other witness's testimony as long as you have it there.

Mr. Frost. (Reading:)

R. W. Rempt, recalled as a witness for the defendant, testified as follows:

DIRECT EXAMINATION.

Witness made a survey for the location of a logging railroad from the summit down to the mouth of the Pysht River and found it possible to construct the road there on a working grade of 4 per cent in favor of the load down to the Pysht River, on an 8.2-mile line. By lengthening out that line 2 miles the grade could be reduced to less than 3 per cent. From the summit down to the Sol Duc, witness thinks he could run on a 4 per cent grade straight down the valley. At the summit in the southeast quarter of the southeast quarter of section 35, township 31, range 12, the elevation is 797.5 feet. The elevation of the crossroads at Sapho is 452 feet, a difference of 327 feet, which gives less than 1 per cent grade. The survey was terminated at the crossroads where the Sol Duc road meets the road to Clallam. This terminus would be about the favorable place to reach the plaintiff's lands with spurs from the main line.

Witness, on cross-examination as to his competency to testify about the cost of construction of railroads, says: That he has built railroads. He superintended the construction of the R. R. & N. Railroad from Tillamook to Buxton, about 100 miles long, a logging road. That was from 1908 to 1910. He was assistant to Mr. Cook, assistant chief engineer of the Northern Pacific Railroad, for four years; had charge of construction work under him for about two years and a half. He moved the bridges at Grays Harbor and made the line changes that were made down there; considered the heaviest piece of construction on Grays Harbor, that being a branch of the Northern Pacific; moved the bridges under traffic, and put in the steel that is there now.

In making his estimate of the cost of constructing the logging railroad regarding which he testified, the witness stated that he took the cost mile by mile from the mouth of the Pysht River and included in his estimate culverts, road boxing, curbing, clearing, and burning. He provided for clearing 40 feet, an average break 20 feet wide throughout—in many places it would not be so wide as that; that is, about the ordinary method of railroad construction—the roadway 20 feet wide. He had the whole estimate totaled and averaged and had embodied it in his written report in his own handwriting. The total estimate up to subgrades for 8.2 miles for 60-pound steel was \$47,518.58, an average of \$4,715.76 up to subgrade. With 65-pound steel he figured \$5,816 per mile, or a total of \$95,209.78.

That was from the top of the hill down to the mouth of the Pysht River. Witness then corrects himself and states that his first figures were for cost to subgrade, on 56-pound steel, the average cost being \$10,351.17, and for 65-pound steel the average cost would be \$11,610.94; that would construct a road as well constructed as the average main line of a common-carrier railroad. He figured that the same average would cover the cost from the summit down to the Sol Duc, but states that that would be a way up high. The distance of the whole line from the mouth of the Pysht to the Sol Duc, or the Forks, would be 14.83 miles by the witness' survey, and his estimate of the total cost of a completed railroad, ready for operation, to the Forks Road on the Sol Duc from the mouth of the Pysht, for 65-pound steel, would be \$173,000. This would provide for a maximum curvature of 15 degrees, which could be reduced by working it out a little. On cross-examination he stated that the distance from Sapho to the middle of the McCarty lands is about 6½ or 7 miles, measuring from the crossroads at Sapho.

Mr. FREAR. What relation has the McCarty lands?

Mr. FROST. The McCarty lands lie between the town of Forks and Quillayute Prairie; that would take them about half way.

Mr. FREAR. The town of Forks is southwest of Lake Pleasant?

Mr. FROST. Yes.

Mr. FREAR. And that is a survey, is it, that had been made by the Milwaukee Road around to the town of Forks, do you know, is that a survey?

Mr. FROST. I do not know as to that.

Mr. FREAR. It appeared up the map that was introduced in evidence of the survey around the town of Forks?

Mr. FROST. I know the survey was made. We discovered engineers in the woods when we were cruising timber around there, but I did not know who they were working for.

Mr. FREAR. Is there anything else you had in mind in regard to this Pysht route, or the logging up there, Mr. Frost?

Mr. FROST. No; I have not.

Mr. FREAR. You were 1 of 20 stockholders who started to go in the Blodgett tract, were you not?

Mr. FROST. Yes.

Mr. FREAR. For the Government?

Mr. FROST. For the Government.

Mr. FREAR. That has been referred to, I believe, as one of the cost-plus contracts this morning, if I understand properly. Now, tell me what your profits were to be under the contract as you made it.

Mr. FROST. Our total profits were to be \$20.

Mr. FREAR. In other words, explain to the committee just what you mean by that, and whatever led up to it, and who the stockholders were. In the first place, let me lead up to the question. What is the name of the company you organized?

Mr. FROST. The Aircraft Lumber Co.

Mr. FREAR. Who were the members of it, briefly, some of them?

Mr. FROST. I think, perhaps, I have a list of them all here. [Producing list.] The Aircraft Lumber Co. was a corporation organized under the laws of the State of Washington. The stockholders were Thomas Bordeaux, of the Mason County Logging Co.; J. L. Bridge—if I may explain the capital stock was largely subscribed by logging corporations, and the managing officer of the corporations would take one or two shares of the stock in order to have representation, perhaps, upon the board of directors, and the corporation itself would

subscribe for the remainder. For instance, my corporation—I took 1 share of stock and the corporation took 49. I will read both ways.

Mr. FREAR. You need not read about the corporate holdings. Just read the individuals who were connected with it.

Mr. FROST. I have already read the names of Thomas Bordeau, and J. L. Bridge. The others were M. H. Draham, A. F. McEwen, E. G. English, W. C. Butler, H. O. Siler, Joseph Ewing, T. Jerome, R. D. Merrill, D. R. Lewis, Henry McCleary, Pat McCoy, T. J. Hartley, George H. Webb, E. M. Stephens, and J. E. Frost. And I have in addition to that the Everett Logging Co., but I have not the name of the individual there.

Mr. FREAR. These individuals whom you have named were identified with certain logging corporations that went into this agreement, as I understand?

Mr. FROST. Yes.

Mr. FREAR. Could you give just approximately the total assets of these various 20 logging corporations?

Mr. FROST. If I may be a little historical.

Mr. FREAR. Briefly.

Mr. FROST. We have an association known as the Loggers' Information Association with a membership consisting entirely of independent loggers. We maintain headquarters and have an employment office in the city of Seattle. That association embraces, I think, practically all of the independent loggers in the Puget Sound District. These men, or the corporations that are represented by these men, embrace nearly all of the large independent loggers in the Pacific Northwest—that is in the Puget Sound Northwest. Therefore, it would be very difficult for me to estimate their holdings, and their net worth. It would run into many millions of dollars.

Mr. FREAR. Possibly hundreds of millions?

Mr. FROST. Perhaps so.

Mr. FREAR. Those were the men who were behind this contract of which you speak?

Mr. FROST. Yes.

Mr. FREAR. What was the character of the contract, just briefly, that you entered into.

Mr. FROST. We entered into a contract to log the timber in what is known as the Blodgett tract in Lincoln County, Ore., at cost, plus \$20; a total compensation of \$20 to us.

Mr. FREAR. Whom did you enter into this contract with?

Mr. FROST. With the United States Government.

Mr. FREAR. Through the Spruce Production Corporation?

Mr. FROST. No. The Spruce Production Corporation was not organized at that time. This contract was entered into directly by the United States Government, represented by Capt. Cookingham, as contract officer.

Mr. FREAR. At about what time was that contract made?

Mr. FROST. The contract was made, as I recall, the 12th of September, 1918. But the negotiations leading to the contract were made prior to that time. The contract was not executed and delivered until after the armistice was signed.

Mr. FREAR. How did you happen to enter into the contract in the way in which you describe; that is, in that manner without going to this Spruce Corporation?

Mr. FROST. I think I am voicing the feelings and sentiment of practically all the loggers in the Pacific Northwest when I say that we felt it was the general opinion that the loggers had not been well treated in the Northwest in the matter of spruce production.

Mr. FREAR. In what respect?

Mr. FROST. We were given no opportunity to bid on these large contracts that had been let. They were let to men who were not in the logging and lumber business, and not familiar with it in the Northwest and who were unheard of and unknown to us. Our observation, and we were, I think, all of us, watching and studying conditions, had led us to the conclusion that the production of spruce logs was going to be an exorbitantly expensive affair. We were animated by a feeling of patriotism and a desire to help, for one thing, and another thing perhaps a selfish desire to save ourselves from the stain that might ultimately be passed upon the lumber and logging business in the Pacific Northwest through the inefficiency, extravagance, and mismanagement of the spruce logging industry as it was conducted by the Seims-Carey Corporation, and the Warren Spruce Co., and we wanted to get out from under it, and we wanted to demonstrate to the authorities and to the world at large that we could put spruce logs in the market at a reasonable cost.

Mr. FREAR. So you agreed to put out what quantity of logs?

Mr. FROST. My recollection is it was 12,000,000 feet a month. I do not remember. But these calculations we were opening up and had further plans looking to putting in a million feet a day.

Mr. FREAR. For what period?

Mr. FROST. Until the tract was exhausted or until we were ordered off.

Mr. FREAR. And about what was the estimate of spruce there that you could log at that rate or basis?

Mr. FROST. The spruce and fir, all together?

Mr. FREAR. Yes. We are supposed to take that testimony in Portland, but it will save us the necessity of taking that testimony in Portland, because you are familiar with it on that Blodgett tract.

Mr. FROST. The Blodgett tract contained 253,790,000 feet of fir, of a very fine quality; and much of it desirable for airplane purposes; 330,581,000 feet of spruce and 180,000,000 feet of hemlock, making a total of 765,317,000 feet. This is for the spruce on the Blodgett tract. I understand that a deal was made for some of the holdings Coos Bay portion adjacent to that, which would perhaps add to those figures.

Mr. FREAR. How did you happen to make the contract of which you speak, with the Government parties you said?—Where?

Mr. FROST. I first took the matter up with Gen. Disque, and I think my first discussion was had in Gen. Disque's office in Portland?

Mr. FREAR. About what time?

Mr. FROST. Perhaps early in July, 1918. I remember being called into a conference at the time. I think the first time I was in Portland that Mr. Seims and Mr. Carey and Mr. Kerbaugh were all there, and it was suggested that we take a subcontract from them, which I declined emphatically to do. And we studied the situation and found the locality where we were logging could be used that was unoccupied and unpreempted, and after much negotiation ultimately agreed upon this contract.

Mr. FREAR. You did not make the contract with the Spruce Production Corporation?

Mr. FROST. The Spruce Production Corporation as I understand it was not organized. This contract of ours is a contract that is executed by the United States Government. It reads the United States Government, and I think afterwards perhaps it was assigned by the Government to the Spruce Production Corporation, but I do not know as to that.

Mr. FREAR. What was the objection, briefly, made by the loggers to taking subcontracts under the Seims-Carey-Kerbaugh contract?

Mr. FROST. I can not speak for all of the loggers, but I can speak for myself. I did not want to be mixed up with them. I did not want to make any money bad enough to be mixed up with the things that I thought were going on.

Mr. FREAR. What was the effect of your producing logs and turning them over to the Seims-Carey-Kerbaugh Corporation, as to their cost-plus contract?

Mr. FROST. Our producing logs?

Mr. FREAR. Yes. I mean if you had been a subcontractor given a subcontract the Seims-Carey-Kerbaugh Corporation were able to make a cost-plus profit on this subcontract, were they not?

Mr. FROST. Oh, yes, I presume they were.

Mr. FREAR. In this case that you undertook down there, this proposition to log the Blodgett tract, you gentlemen connected with the loggers association agreed to log it without profit?

Mr. FROST. Yes.

Mr. FREAR. And what period did you expect it would take to undertake that work?

Mr. FROST. To undertake the work?

Mr. FREAR. Yes, to conclude the work.

Mr. FROST. It would take a year perhaps, about a year.

Mr. FREAR. Beginning at what time?

Mr. FROST. When our contract was entered into or agreed upon or rather before it was signed up—it took quite a while to have the contract drawn up—it was verbally agreed upon. We were supposed to begin logging on the first of October, and that was with the understanding that the railroad was to be completed—the main line railroad from Yaquina Bay to the Blodgett tract, up. It, however, was to be the first of October when the road was to be turned over to us for operation.

Mr. FREAR. How long a road was that?

Mr. FROST. Between 24 and 25 miles.

Mr. FREAR. Who had the construction of it?

Mr. FROST. The Warren Spruce Co.

Mr. FREAR. What was the position of the loggers in relation to a railway in reference to getting out logs?

Mr. FROST. You could not get any logs into the market or get them into use without a railroad. That Blodgett tract is isolated.

Mr. FREAR. When was that road completed, or has it been completed?

Mr. FROST. It was not completed the last time I saw it, and that was perhaps ten days or two weeks after the armistice had been signed.

Mr. FREAR. Was your company at that time undertaking to proceed on the logging business, or to do it?

Mr. FROST. We were falling and bucking.

Mr. FREAR. That is you were working in the woods at that time.

Mr. FROST. Yes.

Mr. FREAR. What were you doing? Were you managing the work, Mr. Frost?

Mr. FROST. Yes; I was president and manager of the Aircraft Lumber Co. and I was actively supervising the work.

Mr. FREAR. What company are you connected with at the present time?

Mr. FROST. I am manager of the Cedar Lake Logging Co.

Mr. FREAR. That is a Washington corporation?

Mr. FROST. Yes.

Mr. FREAR. And I believe you have stated you wanted to get away from here because you had some important matters to look after in connection with some large corporation that is being organized?

Mr. FROST. Yes.

Mr. FREAR. Is there anything else that you think of that is material to this investigation that occurs to you?

Mr. FROST. Not that I know of. I have the maps of the Blodgett holdings down there, if they are any use to you. I have the map of Lincoln County in Oregon and I have a map of the cruise on the Blodgett holdings with a contour map showing the cruise on that ten acres, and also the map of lands that run from Toledo north.

Mr. FREAR. Would you permit the committee to have the benefit of those in our trip?

Mr. FROST. You are perfectly welcome to them.

Mr. FREAR. That would be very generous. We may find use for them when we get down there. At this time in order to identify one or two places I would like to introduce in the record what is known as the McIntyre letter to the Secretary of War, known as set 8, connected with the Ray report which was turned over to the committee.

(The paper above referred to was marked "Exhibit J" for identification, Aug. 21, 1919).

I desire to read it into the record as I may have occasion to inquire on one or two points as to location.

Mr. FREAR (reading):

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, March 5, 1919.

Memorandum for the Director of Air Service:

Subject: Report of investigation Spruce Production Division, December, 1918, and January, 1919.

By direction of the Chief of Staff the inclosed papers with reference to an investigation of the Spruce Production Division made by Maj. M. H. Ray, I. G. D., are transmitted to you for your information.

FRANK MCINTYRE,
Major General, General Staff,
Executive Assistant to the Chief of Staff.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, February —, 1919.

Memorandum for the Chief of Staff:

Subject: Report of investigation of the Spruce Production Division, December, 1918, and January, 1919.

1. The attached papers relate to an investigation of the Spruce Production Division, made by Maj. M. H. Ray, Inspector General's Department, in compliance with a memorandum from the Chief of Staff, dated November 30, 1918, transmitting a memorandum from the Secretary of War, dated November 27, 1918.

2. This memorandum transmitted a copy of a telegram sent in code by the intelligence officer, Portland, Oreg., to the Director of Military Intelligence, Washington, D. C., dated November 23, 1918, in which were reported several matters which had come to the attention of the military intelligence officer. The inspector has divided this telegram into numbered allegations, each one of which he considers in detail. He also investigated other kindred charges which came to his notice while conducting this particular investigation.

3. In his memorandum to the Chief of Staff of November 27, 1918, the Secretary of War states in part:

"I think this ought to be put in the hands of the Inspector General with directions to send a very competent man to the Northwest to investigate the things here referred to, and also to bring down his report on the whole situation to the present time."

The last phrase reading "and also to bring down his report on the whole situation to the present time" is underscored on the typewriter. The report goes on to say:

And again in a letter addressed to the honorable, the President of the Senate dated December 10, 1918, in response to a resolution passed by the Senate of December 5, 1918, requesting, "What, if any, steps have been taken upon the recommendation of Hon. Charles E. Hughes for an investigation of the spruce production section of the Aeroplane Division of the Signal Corps of the United States Army.

"I have the honor to inform you that by my direction, a comprehensive investigation of the spruce production situation was made, and a report rendered during the month of July, by the Inspector General of the Army, covering all the features of the situation as it then existed. On November 30 the Inspector General was further directed to send a very competent man to the Northwest to further investigate this situation and complete his report on the whole situation to the present time. In compliance with these instructions the Inspector General has detailed for this duty Maj. H. M. Ray, of the Inspector General's Department, whom he considers specially fitted by education and special training, and this officer is now engaged in this work. It is the intention of the department that this investigation shall be as thorough and comprehensive as possible."

And again in a memorandum to the Inspector General, dated December 7, 1918:

"The work of the Air Service brought to Washington and into the service of the Government elsewhere, a large number of men of unblemished reputations, unquestioned integrity, and great talent as men of business and affairs. The task to which they came was novel, of great magnitude and difficulty, and was required to be performed with such speed as to make it impossible to devote this new and great business slowly and conservatively. The investigation made by the Attorney General and Judge Hughes, and many investigations made by me or by my direction, have satisfied me that this work was performed with singular efficiency, breadth of imagination and fidelity. That there was here and there, in minor and subordinate places, unfaithful servants, has been discovered and corrected; but the Government owes to these distinguished men who have served it a debt of appreciation for which there is no payment possible. The Government has also an obligation in the matter; it must protect the reputations of these men against unwarranted assault and suspicion and therefore desire the investigation of the Spruce Production Division to be

thorough, and such records made and kept as will always be available to protect the reputations of those who have participated in this great work, and also to protect the War Department against the assaults growing out of misunderstandings, business rivalries, personal jealousies, or any other unworthy causes. Needless to say, I want no limitation put upon the investigation, but wish any wrong-doing discovered called promptly to my attention with recommendations, as to modes of redress."

Let me say parenthetically that this is the letter from the Secretary of War, written to the Chief of the Intelligence Bureau preliminary to the appointment in the matter of the Ray report. The report continues:

4. The report of this investigation is quite comprehensive in nature, but the inspector failed to grasp the apparent intention of the Secretary of War to "bring down his report of the whole situation to the present time," but confined himself rather to the "Howes" telegram and other complaints. There are several matters touched upon which should be cleared up in accordance with the instructions of the Secretary of War to have "such records made and kept as will always be available to protect the reputations of those who have participated in this great work, and also to protect the War Department." From the evidence there is no question here that several of the parties who have alleged grievances intend to make further trouble and possibly force a congressional investigation. The War Department should therefore prepare complete data and file it for future use.

The sentences beginning, "From the evidence there is no question," etc., down through "complete data and file it for future use" has pencil marks scratched through it. The report goes on:

5. One of the complaints which has been most dwelt upon is the question of the location of a railroad to tap the virgin spruce in Clallam County, Washington. The contention is that the Government was influenced by outside business interests and laid out a route for this road which would tap no spruce until it had covered some 30 miles. It appears that on May 18, 1918, a contract was closed between the Spruce Production Division and the Siems-Carey-Kerbaugh Co., for the construction of a "standard-gauge railroad from a point on the line of the Chicago, Milwaukee & St. Paul Railroad Co.'s railroad in the State of Washington, to be determined by agreement between the parties, to the contractor's mill site to be constructed at or near Lake Pleasant in said State." The history of this case as shown by the records in the office of the Chief of Staff and The Adjutant General is as follows:

On March 5, 1918, Mr. Pliny Fisk, of Harvey Fisk & Sons, of New York City, wrote a letter to the Director General of Railways urging the importance of building a railroad into Clallam County, Washington. This letter pointed out two methods of entering this belt; one by the Port Angeles and Gray's Harbor Railroad, which will be referred to hereafter as the Crescent Lake Route and the other by a branch of the Chicago and Milwaukee Railroad, which will be referred to as the Deep Creek Route. Mr. Fisk urged the building of the Crescent Lake Road, the promoters of which were evidently clients of his firm. On March 13, 1918, the Director General of Railways wrote a letter to the chairman of the Aircraft Production Board inclosing Mr. Fisk's letter and stating that it was not the policy of the railway administration to use money, materials and labor in the construction of new railroads unless there was some urgent war need. On April 10, 1918, the Chief Signal Officer of the Army, who was then charged with aircraft matters, wrote a letter to The Adjutant General of the Army in which he recommended that the Government advance the money to cover the cost of building the Deep Creek Railroad. To support this recommendation he inclosed copies of a letter and a telegram from the commanding officer of the Spruce Production Division, a copy of a resolution passed by the Pacific Coast Committee of the Aircraft Board and another passed by the Aircraft Board in Washington. The commanding officer of the Spruce Production Division specifically recommended against the Lake Crescent Route and in a letter of April 8, 1918, gives as reasons the following:

"It will be noted that the Milwaukee extension (Deep Creek Route) will immediately tap large stands of spruce timber between Deep Creek and the

Pysht River, whereas, the proposed Crescent Lake Railroad must be extended its full length before any spruce will be available. Furthermore, it is regarded by many excellent engineers as a very difficult problem to lay rail along either the north or south bank of Crescent Lake and those best equipped to discuss the problem state that the only practicable means of using this line would be to ferry cars or product across Lake Crescent and connect with the Milwaukee near Port Angeles."

And, again, in his telegram of March 20, 1918:

"Distance necessary to open this line (Lake Crescent Route) to reach large spruce tracts double that necessary via Milwaukee (Deep Creek Route) will not give through railway facilities beyond Port Angeles. This line seems an unnecessary expenditure and everybody interested in it wishes Government to bear portion of expense considerably greater than Government would have to bear in extending Milwaukee. Milwaukee have been driving their road west slowly to meet development of country and are now about thirty miles west of Port Angeles. Milwaukee being common carrier equipped to advance their own line over their surveyed road unquestionably best means of entering Clallam spruce. In this opinion I have support of most experienced operators in this section."

That telegram, I take it, was from the Chief of the Spruce Division at that time. It continues:

"Based on these recommendations the Secretary of War on April 24, 1918, approved the building of the Deep Creek Route and wrote a letter to the Director General of Railways, stating in part:

"A virgin stand has been located in the northwestern part of the State of Washington sufficient to meet the necessities of the next two or three years. The nearest railroad is the branch of the Chicago, Milwaukee and St. Paul, running west from Port Angeles. This branch now terminates at Deep Creek."

"The question of a railroad to reach this timber has been carefully considered and it is the unanimous opinion of the Pacific Coast Committee of the Aircraft Board that the best solution of the question is the extension of the Chicago, Milwaukee and St. Paul Railway from Deep Creek to Forks."

You explained that Forks is around southwest of Lake Pleasant. I believe. It continues:

"This extension is included in the plans for the future development of the Milwaukee and the route has already been surveyed.

"It is the opinion of the War Department that this railroad should be built * * *. The point in question is, What caused a reversal of the decision to build the Deep Creek Route and by whose authority was the action of the Secretary of War of April 24, 1918, reversed? The only evidence on this subject is that contained in the testimony of the commanding general of the Spruce Production Division (Gen. Disque). He states:

"We had Mr. Roberts, of the Union Pacific, go over that; Mr. Caliber, who paid out the Canadian Pacific, go over it; Maj. Welch and I personally have gone over all the routes up there in Clallam County, and the Siems-Carey contract to build the railroad was closed in Washington, with the provision that the exact route would be determined by me before they began operations, because in Washington, Mr. Byron, president of the Milwaukee, put a doubt in my mind as to the advisability of going ahead the way we had planned before we went to Washington, so we left it open and came out here again and went over the lines, and then had a meeting in Seattle, attended by Mr. Erling, of the Milwaukee, and his chief engineer; Mr. Roberts, chief engineer of the Union Pacific; Mr. Caliber, who had logged the Canadian Pacific; Mr. ———, who had been a superintendent of the Milwaukee; Mr. Carey and myself. We spent the evening listening to the different arguments and then I decided to build it via Lake Pleasant (Crescent Lake route), and that decision was concurred in by everyone present."

The Inspector (Maj. Ray), who has been discharged, has informed this office (Col. Cocheu) that at the time of his investigation he had no knowledge of the correspondence and action referred to above.

The railroad in question was built via Crescent Lake and the contract given to the Siems-Carey-Kerbaugh Co. The road was intended to ship out the product of the mill to be constructed at Pleasant Lake. The contract for the logging was let to the same Siems-Carey-Kerbaugh Co.

That is a statement that appears in the Ray report. [Reading:]

Who first became interested in spruce production through the agency of Mr. Pliny Fisk, as is shown by the statement that at about the same time that Mr. Fisk wrote to the Director General of Railways urging the building of the road in which he was interested (Crescent Lake route) he also suggested to Mr. Kerbaugh that he form a company for supplying the Government with spruce logged in Clallam and Jefferson Counties, Wash. In view of the positive recommendations of the Aircraft Board, the commanding officer of the Spruce Production Division, and the chief signal officer that the Crescent Lake route be not built, further detailed explanation should be made covering the reason for the reversal of this opinion. It is not intended to cast any reflection upon Gen. Disque and the other officers concerned, but "to protect the reputations" of these men and "to protect the War Department." A possible congressional investigation with reference to the location of this railroad might prove embarrassing to the War Department, as the plain insinuation would be made that the decision was influenced by the large financial interests concerned. The War Department should therefore gather together all available data covering this question and file it for future use in case such an investigation is had." This last provision is struck out with pencil from the words "It is not intended" down to the words "investigation is had."

6. Most of the complaints made were instigated by four men, who claimed to be the representatives of the Pacific Northwestern Logger's Bureau. These men contended in the main that it was not necessary to bring in outside agencies, such as the Siems-Carey-Kerbaugh Co., but that there was available sufficient equipment and men to produce enough spruce to meet the requirements of the United States and its allies. This contention seems to be borne out in part by a letter from Gen. Disque to the "Loggers of Puget Sound," dated September 20, 1918, in which he states in part:

Quoting the letter of Disque:

"I also think it is true that if this enterprise goes forward as now planned, your district will be flooded with logging machinery at the close of the present war, which will react on the value of your present equipment. It is my desire in all our Government operations to avoid disrupting the logging industry wherever this is possible; and I have, therefore, requested the Siems-Carey-Kerbaugh Co. to first make an offer to the loggers of Puget Sound to contract their logging operations rather than follow their present plans of purchasing new equipment and create a new organization. They came to Portland at my request and agreed heartily to adopt my suggestions; although they stated that so far as they personally were concerned, they would much rather carry out their present plans."

Continuing, McIntyre says:

7. It is further alleged that the building of the mill at Port Angeles by the Siems-Carey-Kerbaugh Co. was unnecessary. In a letter to the Secretary of War Mr. John D. Ryan states that:

"As to whether the mill built at Port Angeles, Wash., by Siems-Carey Co., under their contract with the Government was unnecessary and useless. Competent persons should investigate and report. My opinion is that it was absolutely necessary and had to be done if we were to get the spruce that would have been required if the war had not ended as early as it did. One of the largest sawmills in the work"—

I suppose it should be "world." [Reading:]

"One of the largest sawmills in the world is located at Port Angeles, and Siems-Carey Co. tried to buy it, but could not do so at a reasonable price."

Again Gen. McIntyre continues:

In his testimony Gen. Disque states that when his attention was called to it by the logging interests he realized that it would be unjust to them to increase the mill capacity and he therefore entered into negotiations with the Siems-Carey-Kerbaugh Co., with a view to having this corporation make subcontracts with various people in this section of the country for the sawing of logs. This would seem to indicate that the Siems-Carey-Kerbaugh contract was entered into without careful deliberation. There can be no question but that some of

the logging interests in the Northwest deeply resented a "foreign" concern coming into their territory with the largest contract that the Government had let and then subletting part of the work to local operators. The Siems-Carey-Kerbaugh contract was a most profitable one for his corporation and guaranteed a minimum profit of 7 per cent to the contractor on all expenditures, except the overhead cost of the New York office. This clause is unusually liberal in as much as the corporation was being financed by the Government and, had the contract been carried to completion, it would have meant a profit of about \$1,400,000 on a project which involved no financial risk on the part of the Siems-Carey-Kerbaugh Co., and covered a period of 18 months.

There is nothing in these papers to show that any of the principal members of this firm had previous experience in this line of work, but that contract was negotiated and obtained through the efforts of Mr. Pliny Fisk, of Harvey Fisk and Sons. The inspector concludes:

"However, the war situation at the time this contract was made was that the quick and sure production of spruce was an absolute necessity, regardless of cost, and the compensation was approved after careful consideration by the highest Government officials, who were in a position to know the urgency of production and its value to the Government."

The Inspector General in the third indorsement, dated February 10, 1919, invites special attention to these remarks. Due to the lack of cooperation by the Puget Sound loggers and their evident desire to continue commercial logging, which was nonessential to the winning of the war, it was apparently necessary for the War Department to seek the help of the outside operators who would undertake the work of producing spruce for our military needs, and those only. While this idea may be gleaned from the mass of evidence submitted, there is nowhere a definite, concise statement covering this phase of the situation. Such statement should be prepared for the files of the War Department.

8. To add to the dissatisfaction and gossip, Col. Hitchcock, at a conference with the representatives of certain logging interests, gave the impression that this contract was negotiated in Washington and was contrary to the wishes and views of Gen. Disque, whereas in reality Gen. Disque had, in a conversation with Col. Hitchcock, remarked that the cancellation clause did not conform entirely with his view. This loose talk on the part of Col. Hitchcock was most unfortunate, and especially in view of his official position in direct charge of logging under Gen. Disque. Attention is also called to the fact that although Col. Hitchcock was in charge of all operations, he had never, as admitted to the inspector, even read the Siems-Carey-Kerbaugh contract.

9. When the Government first became interested in the question of spruce production Maj. Charles E. Sligh was in charge of these activities and located in Washington. When superseded, Maj. Sligh apparently held Maj. F. W. Leadbetter responsible for the change and has missed no opportunity to make statements reflecting seriously on Maj. Leadbetter's personal and official integrity. It is apparent that Maj. Sligh, although out of the service, still harbors great resentment and as late as December 23, 1918, in a letter to Mr. F. A. Douty of the Multnomah Lumber and Box Co. states as follows:

"A newspaper clipping a few days since stated that in accordance with a suggestion made by Mr. Hughes, the Secretary of War instructed Maj. Ray to investigate Disque's operation, but you know just how far an investigation of that kind would go, it would result in nothing but a whitewash. Our only hope is to wait until a new congress assembles and then furnish one of the House or Senate committees with information that will justify a congressional investigation."

Again McIntyre continues:

Among other things it is insinuated that the Northwestern National Bank of Portland, Oreg., was favored in the matter of deposits of spruce production funds and that this favoritism was due to the fact that Maj. Leadbetter is a director of the bank in question. It is a fact that Maj. Leadbetter is a director and that the printed reports of the bank show him so carried: "Major, U. S. Army." Also, that on October 24, 1918, the total on deposit in three other banks in Portland, Oreg., was \$4,500,000, whereas \$10,500,000 was on deposit in the Northwestern National Bank dated December 31, 1918, shows total deposits to be \$18,849,696.41 of which \$2,673,698.05, or practically one-ninth, were funds of the Spruce Production Division; that on January 14, 1919, the spruce production funds on deposit in the Northwestern had been reduced to \$1,136,790.88

and that the remaining amount of \$2,605,996.00 was divided between ten other banks located in Portland, Seattle, Vancouver, and Pittsburgh, Pa. In an unsigned statement forming part of these papers, the following remark appears:

"Why the Northwestern National Bank was favored with the largest deposit was not clearly explained. It was stated, however, that Capt. Crisp, the first disbursing officer, did his business with that bank; Capt. Bleakley (assistant treasurer of the Spruce Production Corporation and who signs the checks) was introduced there and did the same; and evidently Mr. Moore followed. It is interesting to note, however, that Capt. Crisp was originally on duty in Washington. He came out here as disbursing officer. A statement of condition of the bank herewith, as of December 31, 1918, shows two Army officers—Majs. Kelly and Leadbetter (the latter of the Spruce Production Department, Washington)—to be directors of the Northwestern National Bank. It is possible that Maj. Leadbetter recommended his bank as a good one to do business with. This phase I did not discuss with anyone here."

In a letter addressed to the Inspector General of the Army, dated January 12, 1919, the officer who conducted this investigation made the following recommendation:

"Since it appears from our discussion of the last few days that Maj. Leadbetter's activities may be of importance in the spruce division, I suggest that you direct some officer in Washington to obtain all possible information concerning Maj. Leadbetter and his activities and connections. In doing this, I suggest that the officer make note of all details concerning Maj. Leadbetter's assignments, duties, relationships, and official and unofficial activities, even though they appear insignificant or unimportant to the officer doing the investigating. I suggest this because something may develop in this part of the work which will fit in or explain some of the above or vice versa."

McIntyre continues:

It is believed that the investigation will develop the facts that Maj. Leadbetter was an officer in the Army, whose services were sought by the aircraft authorities on account of his experience in the knowledge of the lumber situation in the northwest, and that his connection with the Northwestern National Bank of Portland has absolutely nothing to do with the fact that this institution was favored in the matter of deposits. In all fairness to Maj. Leadbetter and for his future protection, the investigation recommended above should be made.

10. The inspector deals at length with the recommendations of the Hon. Charles E. Hughes as contained in the report to the Attorney General and points out clearly that the figures furnished to Mr. Hughes by the Finance Division of the Bureau Aircraft Production was misinterpreted. This report of Judge Hughes has been given great publicity and has caused considerable talk in the northwest, where the fact that the Attorney General in his report to the President, dated October 31, 1918, stated that he did not deem the investigation of the Spruce Production Division as suggested by Judge Hughes was justified, is apparently overlooked. The inspector calls attention to the fact that the public has received a wrong impression which can only be corrected by the same wide publicity as was given to the original statement. Whether or not such publicity shall now be resorted to is a matter for the decision of the Secretary of War, but it is believed that most of this talk has subsided, and so it is recommended that no further action be taken at this time.

11. On pages 47 and 48 of his report the inspector arrives at certain conclusions on the entire case. They are concurred in with the exception of conclusion No. 1, which is as follows:

"With the exception of conclusion No. 1, which is as follows" is marked out with pencil:

That the sending of the Howes telegram which initiated this investigation and the serious charges made therein regarding the integrity of Government officials were entirely unjustified and that these charges were forwarded before any proper attempt was made to check and substantiate them, and the officers who prepared this telegram show a lack of appreciation of the seriousness of their duties and responsibilities.

Gen. McIntyre concurs on pages 47 and 48 with the inspector, excepting in regard to this finding.

McIntyre continues:

The Inspector appears to have taken the view that the representatives of the Military Intelligence Division personally brought these charges. There is no question that there was a great deal of talk in the Northwest regarding spruce production and that in the course of routine work various reports came to the attention of the Military Intelligence representatives. In reporting, as they did to the proper authority in Washington by a code telegram and requesting instructions, it is believed that these officers merely carried out their duty. (The two paragraphs above struck out by pencil lines.)

12. In order that he may have a complete understanding of the situation it is recommended that a copy of this memorandum be furnished the Inspector general.

13. Memorandum for The Adjutant General is enclosed.

FRANK MCINTYRE.

Major General, General Staff

Executive Assistant to the Chief of Staff.

There appear, Mr. Frost, to have been, according to this report of Gen. McIntyre, assistant to the Chief of Staff, two routes that were being considered for the construction of this railway. One road was down to Deep Creek, known as the Deep Creek route. Will you briefly describe where that runs, so as to have it a matter of record; that is, the Milwaukee road?

Mr. FROST. You mean, where it is located at the present time, or the extensions?

Mr. FREAR. At the present time.

Mr. FROST. The Milwaukee Railroad runs from Port Hadlock south of Port Townsend, across Puget Sound to Seattle and Everett, and in a westerly direction through Port Angeles, and ends at Deep Creek.

Mr. FREAR. And that is how far from Pysht?

Mr. FROST. It is hard for me to say; I would guess about seven miles, perhaps seven or eight.

Mr. FREAR. I think the map shows it is less than that, but that is immaterial. The Deep Creek route mentioned by the Secretary of War and others to get into this spruce, would have to go up to what lines, or what way? There are two or three ways?

Mr. FROST. From my investigation over there I would say that the nearest and best way to get at the spruce would be to extend the Milwaukee line west to the mouth of the Hoko River, or near the mouth of the Hoko River, and then in a southerly and southwesterly direction up the Hoko and up the Dickey.

Mr. FREAR. Near Clallam Bay?

Mr. FROST. Yes, near Clallam Bay.

Mr. FREAR. Extend it west and then go up the Hoko River to the spruce section?

Mr. FROST. Yes.

Mr. FREAR. And about what distance would that be from Clallam Bay, would you say?

Mr. FROST. It is pretty nearly necessary for me to look at a map. It would be much nearer than by Lake Pleasant, and not only that, but there is a good deal of spruce west.

Mr. FREAR. The Milwaukee is extending its road west, is it not, up as far as Deep Creek, it has been going along gradually that far?

Mr. FROST. Well, that has been my observation.

Mr. FREAR. What?

Mr. FROST. That has been my observation, that they are extending their road west.

Mr. FREAR. The Milwaukee extended its line, did it not, through what is known as the Milwaukee Land Co. holdings, and those are being logged at the present time?

Mr. FROST. Those holdings, as I understand it, were acquired by the Puget Mill & Timber Co., and are being logged at the present time.

Mr. FREAR. Now, the road that runs through the Lake Crescent route, down to Lake Pleasant, is a shorter road—I do not know; is it a shorter road, to reach Grays Harbor than the road around by Deep Creek, Pysht, and Clallam Bay?

Mr. FROST. Yes, it would be considerably shorter.

Mr. FREAR. That is, it is more of a direct line?

Mr. FROST. Yes.

Mr. FREAR. How much would you say, or have you examined the map?

Mr. FROST. I have not examined it, but offhand 25 miles or 30 miles shorter, I should think.

Mr. FREAR. I think you will find it will be more than that.

Mr. FROST. I am just guessing at this. It will be necessary for me to look at a map. I have never thought of that and studied it out.

Mr. FREAR. Forks is below Lake Pleasant?

Mr. FROST. Yes, my recollection is that Forks is about 9 miles from Lake Pleasant.

Mr. FREAR. Now, Forks is north of Grays Harbor?

Mr. FROST. Yes.

Mr. FREAR. About how far?

Mr. FROST. Seventy-five or eighty miles, I guess.

Mr. FREAR. Do you know whether or not the Northern Pacific has been trying to reach north into this Quinault section and up above?

Mr. FROST. The Northern Pacific has a line up the coast as far as Moclips, from Grays Harbor.

Mr. FREAR. How far is that, about?

Mr. FROST. Perhaps 20 or 25 miles.

Mr. FREAR. That is, that would be in the direction of this spruce tract?

Mr. FROST. That is in the direction of the spruce tract. The Northern Pacific has made surveys of a line.

Mr. FREAR. Do you know that they have?

Mr. FROST. I know that to be a fact.

Mr. FREAR. And the Milwaukee has made surveys south, hasn't it; that is to say, both roads, one running from the south and the other from the north have been running toward that point?

Mr. FROST. Yes, sir.

Mr. FREAR. For that point to be the terminal?

Mr. FROST. Yes.

Mr. FREAR. That is suggested strongly in the letter from Congressman Johnson that was read here this morning. Do you know anything else about the routes other than what you have testified, or have you anything in mind?

Mr. FROST. I think not, sir.

Mr. FREAR. That is all.

Mr. LEA. Is the Northern Pacific below Grays Harbor or above at the present time?

Mr. FROST. The Northern Pacific is on the north side of Grays Harbor.

Mr. LEA. What was this point that you referred to?

Mr. FROST. Grays Harbor has three cities, Cosmopolis, Aberdeen and Hoquiam. Hoquiam and Aberdeen are on the north side of Grays Harbor. The Grays Harbor branch of the Northern Pacific leaves the main line near Olympia, this side of Olympia, and extends westerly to Grays Harbor, and runs along the north side of the harbor, through the cities of Aberdeen and Hoquiam, and thence turns north and goes up along the coast, the Pacific coast, and ends at Moclips.

Mr. LEA. About how far is that from the Sound?

Mr. FROST. Oh, let me see; I think from here to Aberdeen is perhaps—

Mr. LEA. I mean the straits instead of the Sound.

Mr. FROST. Oh, the straits.

Mr. LEA. Yes.

Mr. FROST. That is only a guess on my part. That is an unexplored and uninhabited country. To me it seems like a very long distance, because I made the trip on foot once and I did not have much to eat.

Mr. LEA. I did not know but what you might—

Mr. FROST. If I were to attempt to place an estimate on the distance I would perhaps make it too great, under the circumstances, but I think from the Straits of Fuca down to Grays Harbor, or rather, from the Quillayute Prairie or Sol Duc Valley down to Grays Harbor is perhaps 80 miles, just roughly. I might be very much out of the way.

Mr. LEA. How recently have you been up there around Lake Crescent or in this peninsula country?

Mr. FROST. About two years.

Mr. LEA. You have not seen any of the work that was performed by the Siems-Carey-Kerbaugh Co.?

Mr. FROST. No; none of it.

Mr. LEA. Why do you say that the work was extravagant and wasteful and incompetent, if you have not seen any of it?

Mr. FROST. I did see a great deal of the work that was being done in Oregon.

Mr. LEA. By Siems-Carey-Kerbaugh?

Mr. FROST. No; by the Warren Spruce Co.

Mr. LEA. As far as the Siems-Carey competency or wastefulness is concerned, you would not want to put yourself on record as passing that judgment on their work?

Mr. FROST. Only by hearsay, that is all. I do not even know what money they expended up there. I am not familiar with it. They might have built it very cheaply or very expensively, I do not know.

Mr. LEA. Now, I notice, I think it was the Aircraft Director who in the Ray report in speaking of Port Angeles stated that there was no through railroad that reached Port Angeles. Is that a fact or not? I understood that the Milwaukee had connections there.

Mr. FROST. I would not consider that a fact for this reason: That the Milwaukee Railroad has terminals in Tacoma and Seattle, and

reaches all of Puget Sound and the Straits of Fuca with car barges, and the rates from Port Angeles, railroad terminal rates—in other words, the rate on shipments from Chicago and St. Paul to Port Angeles is no greater than to Seattle. The cars are brought to Port Hadlock and transferred to barges and brought right across Puget Sound. So I would say, as a matter of fact, that Port Angeles does have connections.

Mr. LEA. You referred to independent loggers. Will you describe what you mean by that? I am not familiar with that term.

Mr. FROST. I mean that in the Pacific Northwest the greater portion of the logging production is by men who are engaged exclusively in the logging business. In other words, the loggers are the owners of large tracts of timber, and as a rule they are not lumber manufacturers. They produce the logs and the logs, or a large percentage of them, are brought into salt water, and they are made up into rafts, and they are sold to the various mills.

Mr. LEA. You call those men independent loggers?

Mr. FROST. They are independent loggers.

Mr. LEA. I see. Thank you. Could you give me some idea of the average investment in a large saw mill in this section, just approximately? I just want to get a bare idea.

Mr. FROST. Well, we have, myself and my associates have recently been figuring upon the construction of a saw mill with an average capacity of 175,000 to 180,000 feet in an 8-hour run, or 350,000 feet in two 8-hour shifts, and our estimate on the cost of that mill runs to a little more than \$500,000. That, however, does not include the cost of site, millsite, location. That is the cost of constructing the mill ready for operation.

Mr. LEA. So a completed mill represents a considerable investment?

Mr. FROST. Yes. That, however, would not be considered a large mill.

Mr. LEA. About what is considered a large mill, generally speaking?

Mr. FROST. Oh, I should say a mill with double that capacity in eight hours, or double the capacity of that would be considered a moderately large mill. This would be what we call a one-side mill; would only have a head saw, or knock-down saw. Most large mills here have two head saws, band saws, two knock-down saws.

Mr. LEA. I am speaking about the opportunities of the loggers to bid on these contracts. Were you one of the loggers concerned in the question of taking over the Siems-Carey-Kerbaugh contract for logging?

Mr. FROST. Yes, we discussed that phase of it. I participated in discussions.

Mr. LEA. How many loggers were there engaged in the consideration of that matter?

Mr. FROST. I should say somewhere from 20 to 25.

Mr. LEA. The proposition, in effect, was that these loggers, if they would make a contract satisfactory to the Spruce Production Corporation, that they could take this logging work, was that the general idea of the proposition?

Mr. FROST. I think the general idea was that there was a willingness on the part of loggers, under any sort of a reasonable agree-

ment, to do the logging for the Government. As a matter of fact, there was not only a willingness, but there was anxiety on the part of the loggers to do it.

Mr. LEA. Was there any meeting held to consider that?

Mr. FROST. Oh, we had a good many meetings at which this was discussed, along with other things.

Mr. LEA. Was any representative of the Spruce Production Corporation at the meetings?

Mr. FROST. At one meeting of them we had with us Maj. Hitchcock.

Mr. LEA. Was Mr. Donovan there?

Mr. FROST. No; Mr. Donovan is not a member of the Loggers' Association. He is a manufacturer.

Mr. LEA. I mean as representing the Spruce Production Corporation, was he there?

Mr. FROST. I think at the time of these discussions there was no Spruce Production Corporation. I think there was nothing done after the Spruce Production Corporation was organized.

Mr. LEA. Did they finally vote, did the loggers vote on whether or not they would take over the Siems-Carey contract?

Mr. FROST. I do not know that they did. If they did it it was when I was not there. I do not think they were given an opportunity. At least if they were I never knew of it.

Mr. LEA. You only attended part of those meetings, did you?

Mr. FROST. After we entered into the contract for the logging on the Blodgett tract in Lincoln County, Oreg., I was on the ground most of the time down there. I was not in attendance on those meetings. I was actively in charge of that work.

Mr. LEA. You did log some for the Government during the war, did you?

Mr. FROST. None at all, except preparatory work, preparatory to getting the spruce out from the Blodgett tract.

Mr. LEA. Now, when you investigated—

Mr. FROST. I might say this, in my own logging camps I cut special lengths of timbers, for instance, for some of the mills that were customers of mine. They desired certain lengths for ship construction. But that was not for the Government, it was simply for the accommodation of my customers.

Mr. LEA. When you investigated the possible routes of railroads from the Sound, or, rather, from the Straits inland, did you make any survey or did these gentleman whose testimony you have quoted, did they make any survey?

Mr. FROST. Make a survey?

Mr. LEA. Yes.

Mr. FROST. Yes, Mr. Remp made a survey, located a line from the mouth of the Pysht.

Mr. LEA. Did the others whose testimony was quoted make any survey?

Mr. FROST. Well, Mr. Thomson had made the surveys a number of years before, and had made a report.

Mr. LEA. For whom?

Mr. FROST. I believe in his testimony there he said he made it—I can not remember the name—for Mr. Strong, or some one.

Mr. LEA. It was a preliminary survey, I suppose?

Mr. FROST. He made estimates of the cost of constructing a road in there.

Mr. LEA. What I was getting at was how thorough the survey was. I suppose you do not know that of your own knowledge?

Mr. FROST. Well, yes, I examined Mr. Thomson's report very carefully, and from his report I would say that there was a very thorough and a very complete investigation.

Mr. LEA. There was a survey estimate?

Mr. FROST. Yes, sir.

Mr. LEA. I suppose your cruise there was to determine the assessment value of the timber, or, rather, the cruise in which you were interested?

Mr. FROST. The suit was brought to enjoin the collection of taxes upon some 49,000 acres, or approximately 4,000,000,000 feet of timber that lies in and around Lake Pleasant and up and down the Sol Duc Valley. In the complaint of the Lacey people—we speak of them as the Lacey people, it is known as the Lacey holdings over there—they alleged that their timber was isolated and there was no practical or practicable way of getting it to the market, that it was separated from the Straits of Juan de Fuca by an impassable range of mountains, and in determining the value of that timber, the market value of it, it was necessary to show that the timber could be easily and cheaply removed, and for that purpose I put a corps of engineers in the field and had these surveys made, Mr. Remp in charge.

Mr. LEA. About how far south or east of Lake Pleasant did you survey the timber on surveying the railroad line, estimating the timber, the cruise?

Mr. FROST. Oh, we were up the valley of Calawah River, perhaps 5 or 6 miles east, and west to approximately double that distance.

Mr. LEA. How far south of Lake Pleasant does the saw timber run—not south, but east?

Mr. FROST. Up the Sol Duc Valley it doesn't run very far. There is a big burn through, I might say through that Sol Duc country that occurred perhaps 12 years ago. That cleaned off an immense amount of territory, so that all you will have all the way from Joyce, where the new railroad departs from the Milwaukee, until you get perhaps within 4 or 5 miles of Lake Pleasant—there is practically no timber, just a little fringe here and there. The fire has destroyed most of it. The big part of the timber lies to the west and the northwest of Lake Pleasant, and the spruce, I should say, is all to the westward and to the northwest of Lake Pleasant. There is not spruce enough east of Lake Pleasant to cut any particular figure in estimating timber.

Mr. LEA. Now, your construction of railroads, has that been confined to logging roads?

Mr. FROST. No, sir. In my boyhood days I was with the engineering forces of the Pennsylvania Railroad. I was engaged in the construction of the Buffalo, Western and Pittsburg Railroad, and in the construction of the Ridgeway and Clearfield Railroad in Pennsylvania. I built railroads in Pennsylvania for a lumber company with which I was engaged there, and then shortly after I abandoned the practice of law I built one irrigation canal 43 miles in length. I

had charge of that work. And in my own logging operations in the past 6 years I have built perhaps 30 or 40 miles of railroad all told, and I am building them constantly. We have a force of men at work all the time.

Mr. LEA. What traffic would a road such as you have specified, for instance the one in 1915, as costing \$16,000 per mile, about how much traffic would that accommodate? Would there be any limit on the traffic?

Mr. FROST. It just depends upon how rapidly you move your cars over it, the number of passengers, etc. There was no particular limit.

Mr. LEA. That is a question of operation?

Mr. FROST. It is a question of operation. You can haul all the logs you can get on the cars, and as many cars as the road will hold. It depends on your facilities for loading and unloading more than it does—

Mr. LEA. On how well the road was constructed, I presume?

Mr. FROST. It goes without saying that a logger constructs a road pretty well, and pretty carefully. He has got to do that, because logs are a commodity that can not be slammed around like some other things that you would put in box cars, for instance. A logging road, as a rule, is very carefully built, and pretty well surfaced, and graded. I think that the road from Lake Pleasant to Pysht and Clallam Bay, the amount of material that can be handled over the road, depends somewhat on the length of it. I think you can handle as much or more that way than you can by a longer road. It would not take so much rolling stock, and equipment, and as much motive power.

Mr. LEA. Now, your idea was based upon the proposition of extending this road from Port Angeles and then going over into the Pleasant Lake Country?

Mr. FROST. No, our idea, what we were figuring on, was to bring the logs either to the mouth of the Pysht, Clallam Bay, and dump them and raft them, tow them to the market in Puget Sound. That is cheaper and a more logical way of handling the timber in there.

Mr. LEA. That requires more time, of course, to reach your destination, than it would to deliver them all the way by rail, don't it?

Mr. FROST. No; I think not. I think it could be done more quickly.

Mr. LEA. For instance, if you wanted to deliver at Port Angeles, and you had a rail track there, by delivering the shorter distance?

Mr. FROST. You might deliver a few logs more quickly, but you could not deliver them in vast quantities, because a tow contains a great many logs.

Mr. LEA. You could take a larger amount by tow than you could on a train?

Mr. FROST. Yes, and much cheaper; they could be handled much cheaper on the water. They do not move so fast—I mean they do not cover so many miles in the same length of time.

Mr. LEA. The estimates that you made on building this road, I presume, were based upon commercial construction with a reasonable time for completion?

Mr. FROST. These estimates were made not by loggers but by very competent railroad engineers, and I think, my own opinion would be, that a logging engineer would perhaps build a road a little more ex-

peditionously, a little more economically, and at a less cost than these common-carrier railroad engineers would figure on. We have many short cuts and many methods of cheapening the cost of construction that are not commonly employed, have not been brought into effect and force by the common-carrier railroads.

Mr. LEA. That depends upon the ability of the constructor, does it not, the practical ability.

Mr. FROST. I think the logger is more practical in his construction than the average civil engineer in the employ of the transcontinental railroads.

Mr. LEA. Did you have a little feeling of resentment against this outside company engaging in the logging industry here?

Mr. FROST. None whatever against the company; no, sir.

Mr. LEA. What was your objection in that respect?

Mr. FROST. I felt, as a matter of fact, that the industry of the Pacific Northwest had perhaps not been treated with due consideration, and these men being absolutely and completely without experience in logging operations were going to make a very expensive, and, perhaps, inefficient operation.

Mr. LEA. You don't know whether they did—

Mr. FROST. And not only that, but that the industry in the Pacific Northwest would perhaps be held responsible for the conditions that were created by the Seims-Carey, Kerbaugh Co., and by the Warne Paving Co., through no fault of theirs. As a matter of fact, conditions were forced upon the logger that they could not help, could not prevent, and yet the logger and the lumberman of the Pacific Northwest would ultimately have the ignominy ultimately placed upon his shoulder, and we wanted to save our faces and preserve our good reputation.

Mr. LEA. So far as Seims-Carey was concerned, though, of your own knowledge you have no knowledge as to their logging ability, as to who they had to do the logging, or whether they were practical, or with what degree of success they entered the industry, do you?

Mr. FROST. Only hearsay.

Mr. LEA. That is all, I think.

Mr. MAGEE. Now, I was on this speeder that jumped the tracks. I would like to know just what is meant when you speak of a curve of twelve to sixteen degrees?

Mr. FROST. Well, I will have to give you a lesson in mathematics, I guess.

Mr. MAGEE. What I mean is, if you can tell me—

Mr. FROST. Yes; I can.

Mr. MAGEE. How many feet, say, in a certain distance, or a hundred-foot curve, would that be; how many feet of curve, say, in a hundred feet?

Mr. FROST. That would mean on a 12° curve—I can illustrate it right here. We will say that this distance around the curve here is 100 feet, from this point to that. [Indicating.] That means a departure here from this angle of 24° , measured from the center of the circle the curve would ultimately describe.

Mr. MAGEE. Is there any way that you could estimate or approximate it as so many feet of curve, say, per hundred feet, as you do on grading? When you speak of a grade of 2 per cent you mean a rise of 2 feet in a hundred feet, don't you?

Mr. FROST. Yes; we mean a rise of 2 feet in a hundred feet.

Mr. MAGEE. What I want to know is whether you can approximate—

Mr. FROST. I think perhaps Col. Stearns can give you that distance; I can not give it to you offhand.

Mr. MAGEE. Are you an engineer?

Mr. FROST. I used to be, yes; but ordinarily now when I have any occasion to have work of that kind done I refer it to an engineer.

Mr. MAGEE. You could not give us any approximate idea of it, whether it would be 3, 4, or 5 feet of curve in a distance of 100 feet?

Mr. FROST. I can not get your question, whether you mean—this line, we will say, extended on a tangent—

Mr. MAGEE. Suppose you have a curve that extends over 100 feet. Now, you speak of a twelve to sixteen degree curve?

Mr. FROST. Yes, sir.

Mr. MAGEE. What is a safe degree of curve, if I may ask?

Mr. FROST. A safe degree?

Mr. MAGEE. Yes.

Mr. FROST. It depends upon the rate of speed.

Mr. MAGEE. I mean in ordinary railroad construction?

Mr. FROST. I limit my limit railroad construction to 24°. We operate over 24°.

Mr. MAGEE. The maximum?

Mr. FROST. Well, many of them go to 30, but I have mine down to 24. I think that is about what I consider a very safe and practical limit. If you go to 30 you have to slow up.

Mr. MAGEE. Are you familiar with the tracks of the Chicago, Milwaukee & St. Paul Railroad between Disque and the Twin River?

Mr. FROST. No. I have been over them but I am not particularly familiar with them.

Mr. MAGEE. There are a good many fairly sharp curves there?

Mr. FROST. The old practice on the Pennsylvania Railroad, when I was employed by the Pennsylvania, perhaps 35 years ago, was to limit the degree of curvature to 16°.

Mr. MAGEE. You haven't any idea what would be the degree of curvature of those sharp curves on that line between Disque and Twin River?

Mr. FROST. I presume that perhaps 16° would be the maximum. I do not know.

Mr. MAGEE. Now, this road from Lake Crescent to Lake Pleasant, or, rather, from Disque Junction to Lake Pleasant, is a distance of nearly 40 miles, as I understand?

Mr. FROST. From Joyce?

Mr. MAGEE. Yes, or Disque Junction, which is near Joyce, I think, at the junction of the railroad built by the Seims-Carey-Kerbaugh Co. with the Chicago, Milwaukee & St. Paul?

Mr. FROST. My understanding of the fact is that it is between 36 and 37 miles.

Mr. MAGEE. Yes. Now, is there any spruce along that distance?

Mr. FROST. No; none to speak of.

Mr. MAGEE. None to market?

Mr. FROST. None to market; nothing in commercial quantities.

Mr. MAGEE. So that they would have to get beyond the terminal at Lake Pleasant?

Mr. FROST. Yes.

Mr. MAGEE. Before being able to obtain any spruce for market?

Mr. FROST. Yes.

Mr. MAGEE. How near the terminal of this road at Lake Pleasant is this large timber tract that you have described here?

Mr. FROST. Well, Lake Pleasant is perhaps somewhat on the north side, near the center of the tract, near the center of the tract east and west. Toward the west end are the Clallam Lumber Co. holdings, and it is east of the holdings of the——

Mr. MAGEE. How large a tract is that, generally, Mr. Frost?

Mr. FROST. A little more than 49,000 acres, with a cruise of approximately 4,000,000,000 feet.

Mr. MAGEE. Of different kinds of timber?

Mr. FROST. Yes.

Mr. MAGEE. There is fir, and hemlock, and spruce, and some cedar?

Mr. FROST. Some cedar; not much cedar.

Mr. MAGEE. All softwoods?

Mr. FROST. Yes; there are no hardwoods.

Mr. MAGEE. The tract, as I understand it, is heavily timbered?

Mr. FROST. Yes.

Mr. MAGEE. Rich in timber?

Mr. FROST. Yes, sir; very heavily timbered.

Mr. MAGEE. Of these various kinds?

Mr. FROST. Yes, sir.

Mr. MAGEE. Now, do you know anything about the ownership of that tract, who are the large owners in that tract?

Mr. FROST. The Ruddock and McCarthy tract, I think it is owned by Mr. Ruddock largely and Mr. McCarthy. They are men engaged in the lumber business in the southern part of the United States.

Mr. MAGEE. The southern part, where?

Mr. FROST. The southern part of the United States, southern lumbermen.

Mr. MAGEE. In the South?

Mr. FROST. Yes.

Mr. MAGEE. You do not know from what State?

Mr. FROST. No, I do not; but I think perhaps——

Mr. MAGEE. Louisiana?

Mr. FROST. Louisiana, I think, and J. D. Lacey has, of course, an interest in that.

Mr. MAGEE. Where does he reside?

Mr. FROST. He resides in Chicago.

Mr. MAGEE. Do the Laceys own large tracts?

Mr. FROST. These are known as the Lacey holdings. The Ruddock and McCarthy and the Clallam Lumber Co.'s holdings are generally known throughout the Northwest and the lumber world generally as the Lacey holdings.

Mr. MAGEE. That is what I wanted to get at.

Mr. FROST. The Clallam Lumber Co., I think, is owned by Mr. Lacey, and he has a substantial interest—I could tell you in a moment, I think.

Mr. MAGEE. This other company that you mention as being owned by a gentleman in the South, are those lands also designated as the Lacey holdings?

Mr. FROST. The Lacey holdings, the whole tract, or the two tracts. 49,000 acres each, are commonly known as the Lacey holdings. As a matter of fact, there would not be one lumberman in 40 who would know what you were talking about when you talked about Ruddock and McCarthy, or the Clallam Lumber Co.

Mr. MAGEE. The Milwaukee Land Co. has large holdings of timber lands in this locality, has it not?

Mr. FROST. They did have a large holding, a compact body of timber that lies on the south side of what is known as Burnt Mountain, and east of the holdings of Merrill & Ring. That, I understand, has been sold to the Puget Mills & Timber Co., who own a large saw-mill at Port Angeles. It is west and northwest of the so-called Lacey holdings, and west and northwest of Lake Pleasant—

Mr. MAGEE. In this tract?

Mr. FROST. Not in this tract.

Mr. MAGEE. Adjacent to it?

Mr. FROST. Adjacent to it, west and northwest of it. The Milwaukee Railroad owns a great amount of land in there.

Mr. MAGEE. Owns what?

Mr. FROST. Owns a large amount of timber land.

Mr. MAGEE. Have you any idea how much?

Mr. FROST. No; I could not tell you offhand.

Mr. MAGEE. Approximately?

Mr. FROST. Oh, no; a great many thousand acres.

Mr. MAGEE. Twenty thousand acres?

Mr. FROST. I should say that much, at least. Perhaps more.

Mr. MAGEE. Are there any other large owners of lands in that locality that you know about?

Mr. FROST. Well, the Milwaukee Land Co., outside of the Lacey's, is perhaps the heaviest holder in the extreme west end of Clallam County, and the Goodyear Lumber Co. owns a considerable amount of timber north of Lake Pleasant. Merrill & Ring, the Goodyear Lumber Co., the Milwaukee Land Co., and J. D. Lacey are the principal owners in there—are the heaviest owners.

Mr. MAGEE. Then some intimations have been made here of some offer on the part of the Siems-Carey-Kerbaugh Corporation to turn their contract over to certain loggers or lumbermen. Do you know anything about that?

Mr. FROST. Yes; there was some discussion of that. It was suggested that the Siems-Carey-Kerbaugh Co. might be induced to turn their contract for logging over to the loggers of the Pacific Northwest.

Mr. MAGEE. I mean their spruce contract.

Mr. FROST. Well, that spruce contract—as I understand, it was not to turn the contract over, only the logging; not the railroad construction—

Mr. MAGEE. What I want to get at is their contract, that is, as to whether or not there is any foundation for the statement that they were willing to turn their contract over to men here who were loggers or lumbermen familiar with the proposition, and get out.

Mr. FROST. No; I didn't so understand it. I understood they were willing to turn the logging—that is, in other words, to have that proportion or portion of their contract which referred to the logging

of the timber over there eliminated, and turn the logging operations over to the loggers of the Pacific Northwest. That, however, met with the disapproval of the spruce board in Portland. After discussing it for some time——

Mr. MAGEE. Of the what?

Mr. FROST. Of the Spruce Production Board in Portland. After discussing that for sometime, they turned it down. As a matter of fact, Maj. Hitchcock told me he didn't want to do that——

Mr. MAGEE. Who, if you know, in this locality, would know exactly what there is about the proposition?

Mr. FROST. I think perhaps Mr. W. C. Butler, of Everett, would know more about that than anyone else. He was on the ground all the time. I was in Oregon a good portion of the time.

Mr. MAGEE. You mentioned that you didn't want to mix up with the Siems-Carey-Kerbaugh Corporation. What did you mean by that?

Mr. FROST. I meant that I didn't feel at all—it was suggested to me, in Col. Disque's office, in a conference that took place between Col. Disque, Mr. Siems, Mr. Carey, Mr. Kerbaugh, and myself—it was suggested that instead of taking an independent contract to log that we had better take a subcontract, or contract with Siems-Carey, and that I declined emphatically, then and there, to take any contract under them at all. That was the end of it.

Mr. MAGEE. What I meant, was that declination based on any facts which had come under your observation which would be of interest to the committee?

Mr. FROST. Just——

Mr. MAGEE. Or just a feeling that you had?

Mr. FROST. Oh, just a general knowledge of the conditions and the manner in which the Siems-Carey-Kerbaugh contract was let.

Mr. MAGEE. What did you know about it; what had come to your knowledge—not from hearsay, but if you have any personal knowledge of the facts?

Mr. FROST. Well, I have none, only that I was told——

Mr. MAGEE. I don't care to go into that.

Mr. FROST. Repeatedly, that——

Mr. MAGEE. Unless it is something from your own observation or knowledge.

Mr. FROST. I didn't like the looks of the outfit; I didn't want to be mixed up with them.

Mr. MAGEE. Now, did the loggers here, so far as you know, have anything to do with determining the policy of the United States Spruce Production Corporation?

Mr. FROST. Not so far as I know, at the outset. After these contracts were all let, the Spruce Corporation was formed, in which some of the loggers and manufacturers of the Northwest were invited to participate, but I think the loggers were not consulted about letting the contracts; at least, if they were I never heard anything about it, and I have been very active in logging circles.

Mr. MAGEE. Do I understand they were not called in and consulted until the creation of the Spruce Corporation?

Mr. FROST. That is to the best of my knowledge.

Mr. MAGEE. That was some time, as I understand, September, 1918?

Mr. FROST. I think September or October.

Mr. MAGEE. 1918.

Mr. FROST. Yes; it was after the contract——

Mr. MAGEE. A few weeks before the armistice was signed?

Mr. FROST. Yes, it was before the armistice was signed.

Mr. MAGEE. Now, there is one other question I desire to ask you.

Mr. FROST. You spoke about towing logs to market in Puget Sound.

Mr. FROST. Yes.

Mr. MAGEE. Where is the market or markets located that you had in mind, what do you call the places when you speak of market in Puget Sound?

Mr. FROST. Well, there are mills located here and there all over Puget Sound—Bellingham, Anacortes, Everett, Seattle and vicinity, Tacoma.

Mr. MAGEE. Those places——

Mr. FROST. Yes.

Mr. MAGEE (continuing). Are the ones you had in mind?

Mr. FROST. Yes.

Mr. MAGEE. Spoken of generally, I suppose, as the markets here for logs as commodity?

Mr. FROST. Yes. Those are the principal places.

Mr. MAGEE. I think that is all.

Mr. FREAR. Just a question or so. It has been brought out in regard to the Siems-Carey-Kerbaugh Co. wishing you folks to, or offering to let you people, the loggers, take over their contract. That came about, did it, in a letter from Gen. Disque, or Mr. Disque, or Col. Disque—I don't know what he was then—from Disque——

Mr. FROST. I have forgotten.

Mr. FREAR. You don't know the particulars of that?

Mr. FROST. Yes; I ought to be very familiar with them, but I have forgotten whether it was a letter from Col. Disque or whether it was a statement made by Maj. Hitchcock, at a meeting in the Hoge Building, of the Loggers' Information Association, but my recollection is that at a meeting of the Loggers' Association, in which Maj. Hitchcock was present, he made the statement that the Siems-Carey-Kerbaugh Co. had made an offer to turn over the logging end of their operations to the loggers of Puget Sound.

Mr. FREAR. By such means, they could, of course, preserve their contracts and receive their cost-plus profit.

Mr. FROST. Well, not on the logging, but on the——

Mr. FREAR. But from the Government?

Mr. FROST. No; their contract, in so far as the logging was concerned, was to be abrogated, but they would retain the manufacturing and the railroad construction.

Mr. FREAR. Oh, theirs was for flitches that they were to manufacture into airplane stock at so much, and you were to furnish the logs, that was the proposition?

Mr. FROST. We were to furnish the logs; yes.

Mr. FREAR. In that proposition, you were required to furnish how many logs?

Mr. FROST. I don't remember. It was whatever the Siems-Carey contract called for.

Mr. FREAR. I think I will get it from some one else who is familiar with the terms of it.

Mr. LEA. The contract is in evidence; 250,000,000 feet.

Mr. FREAR. No; it is 500,000,000 feet of logs that they required in that, and 250,000,000 of fitches, is the contract that the Siems-Carey-Kerbaugh Co. had, but the proposition made to the loggers was for 500,000,000 feet of logs.

Mr. FROST. I would not say as to that.

Mr. FREAR. Do you know how much mileage or how much railway is necessary, per section, in logging, are you familiar with that part of it sufficient to say?

Mr. FROST. That is a very difficult question to answer. It depends upon the physical characteristics of the ground, and upon the loggers. I would figure—myself, I run a spur through about each thirty acres, and that means a considerable amount of grading. Would be sixteen forties in a section; it would take perhaps at least five miles of spurs.

Mr. FREAR. To what?

Mr. FROST. To log that section.

Mr. FREAR. To log the whole section?

Mr. FROST. Yes, but that—

Mr. FREAR. To log thirty acres?

Mr. FROST. No, to log 640 acres. But that rail and ties could be taken up and used over and over again on the same section. It would necessarily mean that you would have to have 5 miles, to start it, and you would do from 5 to 6 miles of grading, if it is level ground. If, however, you were on a mountain side, where you have to employ switchbacks to get up—if you have unusually rough country—it might take a good deal more than that.

(Thereupon, at 4:50 o'clock p. m., the subcommittee adjourned to meet to-morrow, Friday, August 22, at 10 o'clock a. m.)

FRIDAY, AUGUST 22, 1919.

The subcommittee met at 10 o'clock a. m. in the court room of the United States District Court, Seattle, Wash., Hon. James A. Frear (chairman) presiding.

Mr. FREAR. The committee will come to order. We will hear you now, Mr. Chisholm.

TESTIMONY OF MR. WILLIAM JAMES CHISHOLM.

(The witness was sworn by Mr. Frear.)

Mr. FREAR. Where do you live?

Mr. CHISHOLM. Seattle.

Mr. FREAR. How long have you lived here?

Mr. CHISHOLM. Eleven years.

Mr. FREAR. Where was your home before that?

Mr. CHISHOLM. Minnesota.

Mr. FREAR. You have been engaged in the lumbering business how many years?

Mr. CHISHOLM. Forty-five years.

Mr. FREAR. In the logging business during a portion of that time?

Mr. CHISHOLM. Always in the logging business.

Mr. FREAR. You have always been engaged in the logging business?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Who are you employed by at the present time?

Mr. CHISHOLM. The Merrill & Ring Lumber Co.

Mr. FREAR. Doing business at what point?

Mr. CHISHOLM. Pysht, Wash., at present.

Mr. FREAR. That is on the Olympian Peninsula, on the Straits!

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And about how many miles west of Deep Creek?

Mr. CHISHOLM. About seven and a half miles.

Mr. FREAR. How large operations are they conducting at that point?

Mr. CHISHOLM. We put in about 65,000,000 last year.

Mr. FREAR. Sixty-five million feet of logs?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. How large a company is it; have they other operations, elsewhere?

Mr. CHISHOLM. Yes, sir; in British Columbia and at Grays Harbor.

Mr. FREAR. What have you to say about the comparative size of this company with other companies?

Mr. CHISHOLM. The Merrill & Ring Co. are one of the largest loggers in the State, I think. That is, they are mixed up with other people.

Mr. FREAR. They have different connections?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. What is your business?

Mr. CHISHOLM. I am general manager.

Mr. FREAR. Of their company?

Mr. CHISHOLM. Of this part of it.

Mr. FREAR. Of the Merrill-Ring Co., at Pysht?

Mr. CHISHOLM. Yes.

Mr. FREAR. And you have been there how many years?

Mr. CHISHOLM. At Pysht?

Mr. FREAR. Yes.

Mr. CHISHOLM. About five years.

Mr. FREAR. Where were you before that?

Mr. CHISHOLM. Near Everett.

Mr. FREAR. Working for the same people?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And in the same business?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. You have had general supervision of their work at that point?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Where you are now employed, which includes logging, railroading, building of railroads, etc., I assume. Are you familiar with the cost of railroad construction?

Mr. CHISHOLM. Well, with logging-railroad construction; not main lines.

Mr. FREAR. I mean logging-railroad construction. Have you built any railroads in that section?

Mr. CHISHOLM. Yes, sir; we have built about 25 miles.

Mr. FREAR. Around Pysht?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. When were they built?

Mr. CHISHOLM. Oh, within the last four years. We are building all the while.

Mr. FREAR. Every year?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. You were building last year—1918?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. What can you say as to the cost of railroad building such as you have been putting in?

Mr. CHISHOLM. I think our roads averaged, except last year, around about \$15,000 a mile.

Mr. FREAR. What did they average last year, would you say?

Mr. CHISHOLM. Well, they cost a little more last year. We had a lot of soldiers down there, and they did not do very much, which increased the cost.

Mr. FREAR. That was a question of increased labor cost?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. What was the situation you speak of as to the soldiers?

Mr. CHISHOLM. Why, they simply would not work; that was all.

Mr. FREAR. How many did you have there?

Mr. CHISHOLM. We had about 200 soldiers working on the railroad and from about 100 to 150 in the woods.

Mr. FREAR. How many men did you have in addition to these soldiers?

Mr. CHISHOLM. On the railroad?

Mr. FREAR. Yes.

Mr. CHISHOLM. We had about 40.

Mr. FREAR. Forty civilians and about 200 soldiers working on the railroad?

Mr. CHISHOLM. These other men were contracting men; they did station work.

Mr. FREAR. How many soldiers did you have working in the woods?

Mr. CHISHOLM. About 150.

Mr. FREAR. And about how many other men?

Mr. CHISHOLM. About 150.

Mr. FREAR. That is, around Pysht?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Did you have a contract with the Government or the Spruce Production Corporation?

Mr. CHISHOLM. We had a contract with the Spruce Production Corporation of Gray's Harbor.

Mr. FREAR. Gray's Harbor?

Mr. CHISHOLM. Well, it came through there, our contract.

Mr. FREAR. I am referring more particularly to this corporation down at Portland.

Mr. CHISHOLM. Well, it was primarily there.

Mr. FREAR. What was the nature of the contract? I do not care for details; just give it generally; what was the general character?

Mr. CHISHOLM. They sent for us to go to Portland, and when we got down there they made a proposition to furnish soldiers to put in a railroad.

Mr. FREAR. Who made the proposition?

Mr. CHISHOLM. Major Hitchcock, or Colonel Hitchcock.

Mr. FREAR. At Portland?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. You went down there to see him?

Mr. CHISHOLM. Yes, sir, and the proposition they put up to us was that they were to furnish the men.

Mr. FREAR. You mean that this Spruce Production Corporation was to furnish the soldiers?

Mr. CHISHOLM. To furnish the soldiers, tents, blankets, and cooking outfit; all we had to do was to furnish the food for the soldiers. They would put that road in for us; they would do all the work, and we were to furnish the rails and the machinery and they were to put the road in.

Mr. FREAR. Was there anything stated as to how much railroad construction would be required?

Mr. CHISHOLM. Well, it was to reach a certain point. We figured we had about 6 miles to build.

Mr. FREAR. To build at that time?

Mr. CHISHOLM. Yes, sir; to get into this certain bunch of spruce they wanted us to open up.

Mr. FREAR. What was the logging proposition; you were to furnish the logs, were you?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. On what basis?

Mr. CHISHOLM. You mean the price?

Mr. FREAR. Yes.

Mr. CHISHOLM. The prices they were to pay us were 12, 20, and 35 for Nos. 1, 2, and 3 spruce. The mills were to pay us that.

Mr. FREAR. Was there any particular amount of logs to be cut?

Mr. CHISHOLM. No; we were to get all we could.

Mr. FREAR. They would accept whatever you had?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. What kind of logs were these?

Mr. CHISHOLM. Spruce and fir; good fir.

Mr. FREAR. Was it selected timber in any way?

Mr. CHISHOLM. No. It was the log run. Of course they only took the No. 1 spruce from the mills. Our contract was primarily with the mills, but those were the prices set by the Spruce Corporation with all the loggers, and we had a verbal contract that they would take the logs up to July, 1919.

Mr. FREAR. Now, what happened after you had the consultation which you spoke?

Mr. CHISHOLM. We started in. I told Col. Hitchcock that we had a scow ready to come up and get lumber to build camps for the men. He says: "You don't want any camps. They have got tents and they will get along all right." I says: "It is cold down there and it is better to build camps." He says: "We have those fellows over in France who do not have any camps, and they work out in the wet." I says: "How are you going to cook for them?" He says: "We will send out the field kitchen." I says: "You can not cook for those men down there in this weather without any place to cook in it is impossible." "Well," he says, "I have lived high out with the field kitchen with 50 men." I says, "All right." He says, "All we have got to do is to furnish the lumber to put in the bottoms of the tents and we will furnish the tents and put them up." So we did it.

we got the lumber down there and built the bottoms, and they come down there. They could not cook for 25 men and feed them halfway decent, and consequently the men were getting nothing to eat and they would not work. That is the whole thing in a nutshell, right there.

Mr. FREAR. Who was Hitchcock; where was he from?

Mr. CHISHOLM. I do not know. He was a major or colonel.

Mr. FREAR. A Maj. Hitchcock? These men you employed as they were sent you. That was part of the agreement?

Mr. CHISHOLM. Yes, sir; they said, "We will go in and do all the work, the felling and bucking, and the right of way, and we will lay the ties and make them and lay the rail ready for operations."

Mr. FREAR. What were these men paid?

Mr. CHISHOLM. Well, we were only supposed to board them and, as I understand, they were paid \$2.50 a day and their board.

Mr. FREAR. They were paid \$2.50 a day?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And they paid out of that their board?

Mr. CHISHOLM. No, sir.

Mr. FREAR. That is, over and above their board?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Who paid them?

Mr. CHISHOLM. That came through the Spruce Corporation.

Mr. FREAR. Oh, I see. That is, the money was not paid by your company, but by the Spruce Corporation?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. On time statements made by your company?

Mr. CHISHOLM. Yes, sir. They had a timekeeper there, too. I think there was \$1 deducted from their pay and later it was returned. That was to go to the Government, and then the Government returned that to the men.

Mr. FREAR. In speaking about this railroad construction you said it was a little higher because of the soldiers who were there during that time. What difference did you note in regard to prices at that time compared with what they had been the year before or the year subsequent?

Mr. CHISHOLM. Oh, the prices were higher.

Mr. FREAR. Higher, due to what?

Mr. CHISHOLM. Labor, I suppose; scarcity of labor.

Mr. FREAR. Was there any material difference in the cost of construction if you had had the some kind of men you had had before, or what was the situation? I am trying to get at the comparative cost.

Mr. CHISHOLM. Most of our work down there was station work.

Mr. FREAR. Station work is what?

Mr. CHISHOLM. A hundred feet is a station and we let the work out at so much a station.

Mr. FREAR. To these subcontractors?

Mr. CHISHOLM. Yes, sir. They go in there and take the contracts at so much a station and divide the money up between them.

Mr. FREAR. What was the result there, generally speaking?

Mr. CHISHOLM. We had 40 contractors there making \$8 or \$9 a day and making \$80 a station. We had formerly paid about \$40, or \$45, or \$50; \$52 was the highest we had paid before last year.

Mr. FREAR. What was that due to?

Mr. CHISHOLM. I suppose, the shortage of labor.

Mr. FREAR. Approximately how far is it from Pysht up to the large growth of timber with which you are familiar? I assume it is near Lake Pleasant.

Mr. CHISHOLM. From Pysht?

Mr. FREAR. Yes.

Mr. CHISHOLM. About 15 miles, air line.

Mr. FREAR. This timber is located where, this growth of spruce that has been testified to before the committee; whereabouts with relation to Lake Pleasant?

Mr. CHISHOLM. It was. I think it starts in Pysht close to Lake Pleasant and runs over through to the Hoko.

Mr. FREAR. Which direction would that be?

Mr. CHISHOLM. That would be northwest.

Mr. FREAR. Northwest toward the strait?

Mr. CHISHOLM. Up toward the straights and toward the ocean, too. It runs between the straights and the ocean.

Mr. FREAR. And in about what section; about how many townships would you say the heart of this timber was located in?

Mr. CHISHOLM. I think the best spruce lays in one township.

Mr. FREAR. What township is that, if you know?

Mr. CHISHOLM. I think it is in 31 and 32. It is divided up there. I think.

Mr. FREAR. How far is that from Lake Pleasant?

Mr. CHISHOLM. I think Lake Pleasant would come pretty close, in 31, I think.

Mr. FREAR. Lake Pleasant would be on the eastern side of it?

Mr. CHISHOLM. On the southern side of it.

Mr. FREAR. Then it would be north of Lake Pleasant and toward Clallam Bay.

Mr. CHISHOLM. Yes; between the straits and Clallam Bay.

Mr. FREAR. You say that 15 miles on an air line would be the distance up the Pysht River to this lot of timber? What, if you can say, would be the distance in the construction of road to get out that timber, a logging road; about what distance would be required? Have you ever made a survey of it?

Mr. CHISHOLM. No.

Mr. FREAR. Then you do not know about that?

Mr. CHISHOLM. No, I do not know.

Mr. FREAR. We had some information on that yesterday.

Mr. CHISHOLM. Our folks had a survey made of it.

Mr. FREAR. Do you know anything about that survey?

Mr. CHISHOLM. Nothing, but I have heard Mr. Thomson's testimony in the case.

Mr. FREAR. That was read yesterday. Clallam Bay is west of Pysht, is it not, on the straits?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And about how far?

Mr. CHISHOLM. In an air line across, 6—about 6 or 8 miles.

Mr. FREAR. What direction is it from this timber that is in question here; this spruce timber?

Mr. CHISHOLM. It would lie pretty near to this spruce timber.

Mr. FREAR. Clallam Bay is north of the timber, in a northerly direction?

Mr. CHISHOLM. North and east.

Mr. FREAR. A river comes in there at Clallam Bay?

Mr. CHISHOLM. Well, just toward the ocean from Clallam, that is, northwest of Clallam Bay.

Mr. FREAR. What river?

Mr. CHISHOLM. The Hokko.

Mr. FREAR. Do you know whether or not there have been surveys up the Hokko River with the intention or expectation of sometime putting a road from there up to this timber?

Mr. CHISHOLM. Yes, sir; and Mr. Lightner of the Goodyear Co. told me he had a survey made up there.

Mr. FREAR. He is here, and we can ask him about that later. What is there further that you have in mind about the Hokko route? Have you personal knowledge in regard to that?

Mr. CHISHOLM. I have been up the Hokko some distance, and I think the road could have been put in there, up the Hokko River, to tap the heart of the spruce in about 12 miles.

Mr. FREAR. Up to the heart of the spruce, do you think?

Mr. CHISHOLM. Yes, sir; the heavy spruce.

Mr. FREAR. You would not be able to testify about the cost of construction of such a railroad?

Mr. CHISHOLM. From what I see of the county road—I was up along the county road, several miles that are built up there—I should judge that a first-class logging road would cost \$40,000 a mile.

Mr. FREAR. During last year, during 1918?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. How are the logs brought down to Clallam Bay, if you know, by the Goodyear Co.; the Goodyear Co. logs at Clallam Bay?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. That is a large company?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. They have railroads running out in different directions, some at the Hoko River?

Mr. CHISHOLM. No, sir; not as yet.

Mr. FREAR. What is their method of logging?

Mr. CHISHOLM. Railroad.

Mr. FREAR. Down to Clallam Bay?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Then how do they handle their logs?

Mr. CHISHOLM. Tow them. They put them up in rafts and tow them to Seattle.

Mr. FREAR. Or to the various mills that purchase them?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Is that the same system that you employ at Pysht?

Mr. CHISHOLM. No; they raft theirs different than we raft ours.

Mr. FREAR. They form their rafts in a different way, but you raft yours in the same general way to the mills for sawing?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. How long have you been doing that, ever since you have been there in the business?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Generally speaking, how many feet of logs do you raft, say, a month?

Mr. CHISHOLM. Oh, from 6,000,000 to 7,000,000.

Mr. FREAR. And in the year how much on the average?

Mr. CHISHOLM. Sixty million or sixty-five million. We lay up part of the time; we do not log steady.

Mr. FREAR. How many rafts of logs have you ever lost during the time that you have been there?

Mr. CHISHOLM. Three; that is, partially.

Mr. FREAR. Partial loss?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. How many rafts have you sent during that time to the different mills, generally.

Mr. CHISHOLM. Probably 400.

Mr. FREAR. You have lost three out of 400. So that is less than 1 per cent of the logs that you have shipped that had an accident, and you say that was only partial in those cases?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Do you know anything about Clallam Bay experience in that respect, where the Goodyears are logging?

Mr. CHISHOLM. I do not think they have lost a raft. They have lost some logs that have broken through at their boom; but I do not think they ever lost an entire raft. I would know if they had.

Mr. FREAR. Did you know Edward Donlin?

Mr. CHISHOLM. I met him; yes, sir.

Mr. FREAR. Who was he?

Mr. CHISHOLM. All I know of him is that he was acting as general manager down at Angeles for the Siems-Carey outfit.

Mr. FREAR. For the Siems-Carey-Kerbaugh Co.?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Where was he from, if you know?

Mr. CHISHOLM. I understood he came from Montana.

Mr. FREAR. Do you know whereabouts in Montana?

Mr. CHISHOLM. No, sir.

Mr. FREAR. You saw him there?

Mr. CHISHOLM. Yes, sir; talked with him.

Mr. FREAR. Did you have any business with him?

Mr. CHISHOLM. No business; merely met him on the boat.

Mr. FREAR. What was he doing, do you know?

Mr. CHISHOLM. As I understood around there, I do not know for sure, but he was pointed out and I was told he was general manager of the Siems-Carey people, of all the business there for the Siems-Carey Co., buying and selling.

Mr. FREAR. Your people own stumpage to what extent in the neighborhood of Pysht and Clallam Bay and out through there?

Mr. CHISHOLM. Something around seventeen or eighteen hundred million.

Mr. FREAR. That has not yet been cut?

Mr. CHISHOLM. No.

Mr. FREAR. And how many million have been cut?

Mr. CHISHOLM. We have cut out of that tract about 200,000,000.

Mr. FREAR. So you have left how much to cut?

Mr. CHISHOLM. I should judge about, well somewhere around seventeen hundred million.

Mr. FREAR. And that extends up to what point; I mean, so far as this Lake Pleasant route is concerned? I am trying to show your general familiarity with conditions up there.

Mr. CHISHOLM. I have got a little map that would show you.

Mr. FREAR. That would help. I do not care to go into details; I just want to know in a general way. [Examining map.] It extends then from near Deep Creek?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. About 3 miles from Deep Creek according to this map, to a point about——

Mr. CHISHOLM. Nearer Deep Creek than that, I think.

Mr. FREAR. Oh, yes. In one place it comes up almost to the creek, and then extends to a distance of about 10 miles, would you say, from Clallam?

Mr. CHISHOLM. No. It is nearer Clallam than that.

Mr. FREAR. Oh, yes; about 4 or 5?

Mr. CHISHOLM. About 2 miles.

Mr. FREAR. Let me get it correct; it extends from practically the edge of Deep Creek on the east to within 2 miles of Clallam Bay on the west?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And from the straits back a distance of——

Mr. CHISHOLM. Oh, 8 or 9 miles.

Mr. FREAR. Yes; 8 or 9 miles. It extends up the Hokko River, does it?

Mr. CHISHOLM. No, sir.

Mr. FREAR. Up the Pysht?

Mr. CHISHOLM. Up the Pysht River. This is the Pysht running up through here [indicating on map].

Mr. FREAR. And it is practically a solid tract of timber?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. What kind of timber is it?

Mr. CHISHOLM. Spruce, fir, hemlock, and cedar.

Mr. FREAR. Do you know anything about where the route of the Milwaukee Road has been surveyed?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. In the past, from Deep River west?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. About what line is it, as far as you can show? Just give it roughly.

Mr. CHISHOLM. Well, roughly, it runs along—follows the shore pretty well.

Mr. FREAR. Make a pencil mark there, if you will.

Mr. CHISHOLM. Yes; no curves or anything [indicating].

Mr. FREAR. I wish to get it in the record.

Mr. CHISHOLM. Something like that [indicating].

Mr. FREAR. That is, it runs from Deep Creek parallel and within less than a mile at any point to Pysht?

Mr. CHISHOLM. Yes, sir. There may be one place there where they jog off to get around a little stream. It might be more than a mile from the straits.

Mr. FREAR. Less than a mile from the coast?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Or the straits, rather, and then up the Pysht River!

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. To what point?

Mr. CHISHOLM. Well, I do not know. I did not follow their survey right through.

Mr. FREAR. I did not know whether you knew?

Mr. CHISHOLM. I have been on their survey at different places, but I do not know just the exact points.

Mr. FREAR. Where does the Ring Railway run?

Mr. CHISHOLM. The Merrill & Ring Railway?

Mr. FREAR. Yes.

Mr. CHISHOLM. They start here and go up the river [indicating].

Mr. MAGEE. Can you describe it and get something in the record?

Mr. FREAR. I will put it in the record after he indicates it there.

Mr. CHISHOLM [indicating]. This is practically the end of our main line, and we branch out here, over in here. That is the nearest point to Deep Creek that we run out, right there on section 24.

Mr. FREAR. That is, on section 24, within a mile of Deep Creek?

Mr. CHISHOLM. Well, probably 2 miles.

Mr. FREAR. Two miles from Deep Creek is the eastern terminal—I suppose that is a spur [indicating].

Mr. CHISHOLM. That is a spur.

Mr. FREAR. To the spur, yes; and then runs——

Mr. CHISHOLM. That runs west for 3 miles, and then a northwesterly course, and then runs a northeasterly course to our land.

Mr. FREAR. Up to your land?

Mr. CHISHOLM. Up to our country.

Mr. FREAR. What amount of main track have you?

Mr. CHISHOLM. Well, that is a question. We call it about 4 miles and a half of main track and then we branch from that. We do not call that main line.

Mr. FREAR. Is there anything else that you have in mind that I have not asked you about in regard to this timber—that is, with which you are familiar, either the timber that is up there at the Pleasant Lake region or the railroad building with which you are familiar; anything I have failed to ask you about?

Mr. CHISHOLM. I think it was a crime to build that road up there to get that timber out when it could have been put in there for half a million dollars.

Mr. FREAR. You mean it was a crime to build it up the way it was built?

Mr. CHISHOLM. Yes, sir; from Lake Crescent.

Mr. FREAR. Up by way of Lake Crescent?

Mr. CHISHOLM. Yes.

Mr. FREAR. Was it feasible to have built up the Pysht River?

Mr. CHISHOLM. Well, it was feasible to build up the Pysht River, but the Hokko was the best.

Mr. FREAR. That is, the Hokko at Clallam Bay would have been closer than any other point?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Could they have carried on a railway all the logs out of there that could have been—I will strike that out—How many logs do you say that you handle a month?

Mr. CHISHOLM. About 7,000,000.

Mr. FREAR. By increasing your force how many logs could you have handled there?

Mr. CHISHOLM. Well, that is a question.

Mr. FREAR. With the same railway facilities that you have now, excepting the extension of the spurs, how many logs could you handle there?

Mr. CHISHOLM. Well, you could go on increasing your outfit and handle any amount of logs up to 500,000,000 by increasing the force.

Mr. FREAR. If the logs were available?

Mr. CHISHOLM. Yes, sir. I think that they could have handled very easily half a million feet, 500,000 feet a day there over the Goodyear Road without any trouble.

Mr. FREAR. As it is to-day?

Mr. CHISHOLM. No; by building up the Hokko River, and they could have towed them with safety. They could have built a mill at Angeles. Say they were going to tow logs from Angeles up the sound, the worst tow on the straits is from Angeles to Dungeness.

Mr. FREAR. That is between Angeles and Seattle, is it?

Mr. CHISHOLM. Yes, sir. That is the worst point on the straits to tow logs.

Mr. FREAR. For what reason?

Mr. CHISHOLM. Because they get adverse winds; they get southeasters and northwest seas meeting.

Mr. FREAR. That is where the sound and straits come together?

Mr. CHISHOLM. No, sir; it is Dungeness Point out there and the southeaster will blow out of Discovery Bay and there will be a northwest roll in from the straits. That is the worst point on the straits, and they were going to tow by that. We can tow logs from Pysht and are never held up there as much as we are from Angeles. We get to Angeles all right, but from Angeles to Dungeness we have lots of trouble. We have to wait over a great deal.

Mr. FREAR. That calls to my mind that in the record it appears that from certain directions there are heavy winds come in at Port Angeles?

Mr. CHISHOLM. Yes.

Mr. FREAR. What is the situation there and from what direction?

Mr. CHISHOLM. Well, from a northeast wind there is no protection at all in Port Angeles, or, in fact, on any point on the Straits there is no protection from a northeast wind, unless you get way up in Discovery Bay. A northeast wind hits every place in the straits.

Mr. FREAR. What was the situation with reference to the location of the Seims-Carey-Kerbaugh mill which was built at a point east of Port Angeles? Was it more or less exposed there?

Mr. CHISHOLM. Yes sir, exposed to all northeasters, and a certain amount of northwest roll coming in from the straits.

Mr. FREAR. Was there much protection or any difference in protection there from what you would have in other places on the straits with such a wind?

Mr. CHISHOLM. Well, the Puget Sound Mills & Timber Co., where their mills are, are protected from all except northeasters.

Mr. FREAR. By what?

Mr. CHISHOLM. By Ediz Spit, which runs out there.

Mr. FREAR. What is the distance across the straits from Pysht, the mouth of the Pysht, and Clallam Bay, approximately, over to Vancouver?

Mr. CHISHOLM. Across to Vancouver Island?

Mr. FREAR. Yes.

Mr. CHISHOLM. About 16 miles.

Mr. FREAR. About how far are you from the Pacific coast?

Mr. CHISHOLM. Oh, I don't know; in the neighborhood of 40 or 50 miles.

Mr. FREAR. Forty or fifty miles east of the Pacific coast.

Mr. CHISHOLM. Yes.

Mr. FREAR. That is just to get the points of the compass. I believe that is all.

Mr. LEA. There is a large mill at Port Angeles already, isn't there?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Who is the owner of that mill?

Mr. CHISHOLM. Well, it is called the Puget Sound Mills & Timber Co., owned by the Chas. Nelson interests of San Francisco.

Mr. LEA. They get along there successfully, do they not?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. They are exposed to these northeasters, are they not?

Mr. CHISHOLM. Well, to a certain extent, but nothing like where this other mill is built.

Mr. LEA. How far away is the other mill?

Mr. CHISHOLM. I think it must be about—oh, 3 or 4 miles between the mills. They are right in the bight of the spit, right down in the spit, and the spit runs out like that [indicating.]

Mr. LEA. The spit runs along the west side of Port Angeles, does it not, out into the straits?

Mr. CHISHOLM. Well, it would be on the east side.

Mr. LEA. It begins west and runs toward the east, though, does it not?

Mr. CHISHOLM. Yes.

Mr. LEA. And this mill that you refer to is on the shore, where the spit strikes the shore?

Mr. CHISHOLM. Yes, sir; sets right in at the butt of the spit.

Mr. LEA. That protects it on the ocean side?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. But there is a straight shoot from the northeast?

Mr. CHISHOLM. If a northeaster comes down in here it would not hit them straight, but it creates quite a swell in there.

Mr. LEA. You furnished logs for the Government during the war, did you?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Outside of this railroad that you built, did you furnish any logs for this road that you built?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. That was spruce and fir?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. You got the same price paid the others, did you?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. And the Government would, or rather the Spruce Production Corporation would take all that anybody offered, wouldn't it; timber that was suitable?

Mr. CHISHOLM. Yes, sir; so far as I know.

Mr. LEA. Was there any limitation of your production—there wasn't any limitation placed on your production?

Mr. CHISHOLM. No, sir.

Mr. LEA. Did you get any selective logging during the war?

Mr. CHISHOLM. No, sir.

Mr. LEA. What do you think of that method of logging?

Mr. CHISHOLM. I do not think it would work out.

Mr. LEA. You think it is more practical to take the forest just as you can?

Mr. CHISHOLM. Yes.

Mr. LEA. And that is a more efficient method of logging?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. What did you say your total product was?

Mr. CHISHOLM. Between sixty and sixty-five million last year.

Mr. LEA. You are just loggers, as I understand it?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. You deliver to various places around on the Sound?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. And on the straits?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Now, to increase your production would simply require the extension of your road, and, of course, more labor?

Mr. CHISHOLM. More labor, more machinery, donkeys, and locomotives.

Mr. LEA. There is a vast timber supply available there, though, is there not?

Mr. CHISHOLM. In that country?

Mr. LEA. Yes.

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Including spruce?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. About what proportion of your product was spruce?

Mr. CHISHOLM. Why, the first six months last year I think it ran about 20 per cent, and the last six months about 50 per cent.

Mr. LEA. Under normal conditions, about what percentage would it be; or have you any record of that?

Mr. CHISHOLM. Oh, it runs about 20 per cent—15 to 20 per cent. We opened up a tract down there last year—a special tract of practically all spruce.

Mr. LEA. As I understand it, for the last 11 years, practically, you have been engaged in this business; devoted your time entirely to it?

Mr. CHISHOLM. Out here on the sound; yes, sir.

Mr. LEA. And in logging features?

Mr. CHISHOLM. Not milling; but just logging.

Mr. LEA. Well, excuse me; yes.

Mr. CHISHOLM. Yes.

Mr. LEA. Now, as a practical logger, would you have wanted to have taken a selected logging contract in your timber?

Mr. CHISHOLM. No, sir.

Mr. LEA. State the reasons why you would not.

Mr. CHISHOLM. Why, in the first place, it would be very expensive; and in the second place, it would open up the whole tract to fire—a fire risk.

Mr. LEA. It increases the fire risk?

Mr. CHISHOLM. Yes, sir; increases the fire risk and destroys a lot of other timber.

Mr. LEA. Timber that is scattered through the forest?

Mr. CHISHOLM. Yes.

Mr. LEA. How about the damage to other timber?

Mr. CHISHOLM. I say that there is a damage to other timber, and a considerable expense in falling and logging.

Mr. LEA. Do you know whether any of the loggers who were in the business here wanted to take selective logging contracts?

Mr. CHISHOLM. I do not think it, not to my knowledge.

Mr. LEA. It was an uneconomical way of handling the logs, wasn't it?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. The only justification that could be urged for that would be the pressing needs of war, if they existed?

Mr. CHISHOLM. Yes.

Mr. LEA. That is the only one you know of?

Mr. CHISHOLM. That is the only thing.

Mr. LEA. Now, was this road completed that you constructed?

Mr. CHISHOLM. Well, it was completed as far as this body of spruce, this thick body of spruce ran.

Mr. LEA. What I mean is, for the length that you agreed to extend the road?

Mr. CHISHOLM. Yes, it was completed and we logged over it.

Mr. LEA. Was an adjustment made with the Spruce Production Corporation for your contract?

Mr. CHISHOLM. No, sir.

Mr. LEA. That is not yet adjusted?

Mr. CHISHOLM. No, sir.

Mr. LEA. Has a determination been reached upon it?

Mr. CHISHOLM. No, sir. They say the verbal contract was no good.

Mr. LEA. Well, now, as I understand it, before the Dent law was passed your claim was rejected, wasn't it, or was it?

Mr. CHISHOLM. Well, we have had it up two or three times with Col. Disque, but he said he couldn't do anything for us.

Mr. LEA. Now, after the Dent law was passed, providing for the adjustment of such contracts, have you had a hearing on it?

Mr. CHISHOLM. No, sir.

Mr. LEA. What is the status of your claim at the present time?

Mr. CHISHOLM. Well, the amount?

Mr. LEA. No, I do not mean that. At what stage is it in the process of adjustment? Are you seeing daylight on it or not?

Mr. CHISHOLM. Not so far.

Mr. MAGEE. Does the Dent law include verbal contracts; does it include wholly verbal agreements?

Mr. LEA. I will ask him about that.

Mr. CHISHOLM. Excuse me, but as to that part of the business I do not look after that—the money part of it.

Mr. LEA. We just want to get a general idea. As I understand it you had a verbal contract to do this work?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. And then, when the Treasury Department refused to pay such claim, your claim was kicked out, in effect?

Mr. CHISHOLM. In effect, yes; as far as I know.

Mr. LEA. And then the Dent law was passed, which provided an opportunity to collect it, but so far no adjustment has been made?

Mr. CHISHOLM. No.

Mr. MAGEE. Does the Dent law include a wholly verbal agreement?

Mr. FREAR. He says he does not know.

Mr. LEA. You went ahead and built this road on a verbal agreement, did you?

Mr. CHISHOLM. Yes, sir. We had a contract, but I guess some parts of it was never signed up, and they called us to Portland once and they were very busy around there, had about 15 men looking up our contract to see if we had signed a contract, but we hadn't signed it. We were going ahead just the same. They were very much worried at that time.

Mr. LEA. Simply a technical defect in your contract?

Mr. CHISHOLM. I suppose so.

Mr. LEA. Now, who had charge of the feeding of the soldiers engaged out there?

Mr. CHISHOLM. We did—we furnished the food.

Mr. LEA. At your own expense or at the expense of the Government?

Mr. CHISHOLM. No, sir; at our own expense.

Mr. LEA. Was there any allowance made for that, or did you employ the men and work them as your men, is that the idea?

Mr. CHISHOLM. No; they were working under Government officers. We were supposed to put in overseers, foremen, and they were supposed, these men, were supposed to do the work. Now, part of the work they couldn't do, because they didn't know anything about it. We had to put in our own buckers and fallers to get the right of way cut out.

Mr. LEA. They were inexperienced men?

Mr. CHISHOLM. Those men that were sent to us—they told us they would send experienced men down there. Why, I went down there at different times to Portland to get men from Vancouver, and they would send me over to Vancouver—there to the barracks and tell me—an officer would call the men out, and he would say, "Now, if these men lie to you and can not do the work when you get them down there we will bring them back and make it hot for them," but we could never get a man returned, because they said it was too expensive to pay their fare back and forth.

Mr. LEA. As a matter of practical experience, it is very difficult to go out in the open market and get experienced men for lumbering, isn't it?

Mr. CHISHOLM. Yes; it is.

Mr. LEA. I mean in large numbers?

Mr. CHISHOLM. Yes; but if a man wants to learn he can learn it in a short time, certain parts of the work. Falling and bucking, he

can not learn in a day. We took a good many men in our camps and got some very good men.

Mr. LEA. Soldiers?

Mr. CHISHOLM. Yes, sir. We were paying those men ourselves.

Mr. LEA. Were not a large part of our soldiers willing to try to learn?

Mr. CHISHOLM. There was a large part of the fellows that were not willing to try that we had working on the railroad. I do not blame the men at all; it was the conditions they were working under. They were not getting enough to eat. If a man does not get enough to eat he can not work.

Mr. LEA. How much were you allowed for feeding them?

Mr. CHISHOLM. We were not allowed anything. We were supposed to furnish the food and they were supposed to cook it. They were to furnish the cooks. We had nothing to do with anything only just to furnish supplies, and we furnished the same supplies as in our own camps.

Mr. LEA. How long did you have them in there?

Mr. CHISHOLM. They were there in the neighborhood of five months.

Mr. LEA. Did conditions improve during that time?

Mr. CHISHOLM. Why, they did later, after I got lumber and built a camp and put in cook stoves, and put in our own cooks and cooked for them, they did improve.

Mr. LEA. About what time was it when you began these operations?

Mr. CHISHOLM. In February.

Mr. LEA. February, 1918?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Now, Mr. Chisholm, a charge has been made to this committee against paying the soldiers civilian wages while engaged in spruce production. Personally I believe they should have been paid civilian wages, but I want to get your judgment about that matter.

Mr. CHISHOLM. I think they should, too. I think so.

Mr. LEA. Do you think it would be practicable to compel the soldiers, simply because they had a uniform on, to go out there and work opposite a civilian and only receive a soldier's pay?

Mr. CHISHOLM. No; I do not think that would be right.

Mr. LEA. What was paid to these green men that you had that were not able to perform the work efficiently?

Mr. CHISHOLM. We paid them the same wages that we paid other men at the same jobs. There was no difference made in them at all.

Mr. LEA. Did anybody request that you should make a difference in them?

Mr. CHISHOLM. No, sir. The men that were in our camps, and we have got the best camps or as good camps as there are in the State. they would come down there and tell us they had to have more air space, more air space, and more this and more that, but the fellow over on the railroad they took just whatever came along. There was nothing said about them at all, but these men that were in the good camps of ours said they didn't have air space enough, we would have to cut out some men, cut three or four men out of the camp. We had an architect design those camps, and designed the air space for so many men.

Mr. LEA. Those were wooden camps?

Mr. CHISHOLM. Yes.

Mr. LEA. The soldiers were in tents?

Mr. CHISHOLM. They were in tents and out in the rain, and couldn't dry their clothes, and we had drying rooms in our camps, and bath rooms.

Mr. LEA. About what was the annual rainfall up there?

Mr. CHISHOLM. I do not know. The annual rainfall since we have been there has not been over—I do not think to exceed 40 inches at any time since we have been there.

Mr. LEA. What was the grade of your railroad—the one that you constructed last year?

Mr. CHISHOLM. The heaviest grade was 4 per cent.

Mr. LEA. What was the maximum?

Mr. CHISHOLM. Well, about 3 miles would run from $2\frac{1}{2}$ to 4, and the balance was practically level.

Mr. LEA. Four per cent was the maximum?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. Now, you spoke of being laid up part of the time. Was that for logging?

Mr. CHISHOLM. No; things were shut down in this country on the Fourth of July, and stayed shut down two or three weeks, and at Christmas was shut down two or three weeks. That is what I mean.

Mr. LEA. Was there any interference with towing on the Straits or on the Sound?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. What time of the year is that?

Mr. CHISHOLM. All times of the year.

Mr. LEA. And for what reason?

Mr. CHISHOLM. Wind, rough weather, seas, rough weather.

Mr. LEA. What is the general water conditions out in the Sound, as to storms, how frequently do they occur there and how long do they last, that is the idea?

Mr. CHISHOLM. Not so much the storms on the sound and straits as it is the roll in from the ocean, the ground roll from the ocean. We have light northwesterners most of the summer, but there is a good deal of ground swell comes from the ocean up the straits, and that is detrimental to towing logs.

Mr. LEA. At present there is no rail connection to the outside market from your place of operation, of course?

Mr. CHISHOLM. No, sir; none from the peninsula.

Mr. LEA. Now, this Dungeness, where is that? I am not familiar with the location?

Mr. CHISHOLM. That is about 18 miles from Angeles, on the straits. If you have got a map here, I will locate it for you.

Mr. LEA. In which direction, west or east?

Mr. CHISHOLM. Southeast, I should think, southerly.

Mr. LEA. That is near enough. You never saw Mr. Donlin but the one time you spoke of?

Mr. CHISHOLM. Yes, I met Mr. Donlin several times.

Mr. LEA. He was only out here a brief time?

Mr. CHISHOLM. Yes, he was only here a short time.

Mr. LEA. And he had nothing to do with the railroad operation of the Seins-Carey, Kerbaugh Co.?

Mr. CHISHOLM. I do not know. I understood from the talk around, like passing talk around; I never asked Mr. Donlin if he was the general manager, but that was my understanding.

Mr. LEA. I think that is all.

Mr. MAGEE. Do you think that a soldier building a railroad, helping to build a railroad 6,000 miles from the front should receive several times more pay than a soldier on the fighting front?

Mr. CHISHOLM. Well, that there is a peculiar question to ask. I do not think he should.

Mr. MAGEE. Certainly. And do you think that a soldier under orders of the Government, paid by the Government, simply because he is sent to build a railroad, should receive civilian pay?

Mr. CHISHOLM. Well, under those conditions I do not know. I think he should. I think it would cause trouble among our own men—that is, civilians—

Mr. MAGEE. If he were to receive it, it would have to be under authority of Congress and the enactment of a statute providing for his pay, wouldn't it?

Mr. CHISHOLM. Well, I don't know; I never went into it that deep. We just merely done it, and that was all. We paid them.

Mr. MAGEE. Of course, you know the pay is provided by congressional enactment?

Mr. CHISHOLM. Yes, sir; I know that the soldiers' pay is.

Mr. MAGEE. You say the men would not work because they were not fed?

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. What reason do you give for not feeding them?

Mr. CHISHOLM. They had no way to cook.

Mr. MAGEE. Who was running that end of it?

Mr. CHISHOLM. Why, the Spruce Corporation, Col. Hitchcock, or Maj. Hitchcock, or whatever title he holds. He was the man that was handling it. It was through his office, I suppose. We done all our business with him, practically.

Mr. MAGEE. When the men did not work did you call it to Col. Hitchcock's attention.

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. The conditions?

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. What did he say?

Mr. CHISHOLM. He sent more men down there, more officers, to look the situation over, and he would keep sending them down as sometimes there was half as many officers as we had men.

Mr. MAGEE. Did those conditions continue for a material length of time?

Mr. CHISHOLM. Yes, sir; they continued until we got those cars built and cook stoves and put in our own cooks, so that we could feed the men.

Mr. MAGEE. Until better conditions were created there through your efforts and direction?

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. According to what you had stated to Col. Hitchcock at your first conversation as to what would be needed?

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. That is right, is it?

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. Now, I would like to ask you, Mr. Chisholm, just how much spruce, if you know, was available along the coast in Washington, excluding this timber tract that has been described here in the locality of Lake Pleasant?

Mr. CHISHOLM. Oh, it would be a pretty hard thing for anyone to answer that question.

Mr. MAGEE. The point I have in mind is whether there was sufficient other spruce available without building this railroad from Lake Crescent to Lake Pleasant, over a branch of the Olympic Mountains, to get into this tract of timber?

Mr. CHISHOLM. According to my own personal views I think there was no necessity of any roads being built that they built, either in Oregon or Washington; that the loggers could have produced the spruce.

Mr. MAGEE. And that sufficient spruce was available——

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. Without getting into this particular tract which has been described here.

Mr. CHISHOLM. Yes, sir.

Mr. MAGEE. I think that is all.

Mr. CHISHOLM. I heard a man tell Col. Disque—there was a meeting called over in the University of the State of Washington, the State university, and \$10,000,000 was asked to be sent out here for Col. Disque to let contracts, and after they talked pro and con for two or three hours a logger got up and told Col. Disque, he says, "Col. Disque, you do not need any money. You tell us what you want and we will get it and we will get the money, if it is a million a day or two million or three million, we will get it." But seemingly Col. Disque didn't want that; he wanted something else.

Mr. MAGEE. I take it you state from your own knowledge that the loggers here were entirely willing to do their utmost to aid the Government in getting the necessary spruce timber in this emergency?

Mr. CHISHOLM. Yes, sir. I invited Col. Disque to come down to our camps and see what they were trying to do.

Mr. MAGEE. Along that line, will you state, if you know, whether the loggers had sufficient mills functioning and sufficient equipment, without the purchase of any new equipment on the part of the Government, to go ahead and supply the necessary spruce?

Mr. CHISHOLM. Well, they did do it. I think there was enough spruce to build a few airplanes when the war stopped.

Mr. MAGEE. I think that is all.

Mr. FREAR. Who was present at this meeting of which you just spoke?

Mr. CHISHOLM. President Suzzalo, Col. Disque, C. H. Cobb, W. E. Boeing, Alex. Polson, and there was—oh, I don't know—several.

Mr. FREAR. A number of loggers?

Mr. CHISHOLM. Yes, sir; loggers.

Mr. FREAR. What did Disque say?

Mr. CHISHOLM. Why, he said the loggers were not trying to get out logs.

Mr. FREAR. What did he know about it?

Mr. CHISHOLM. Well, I do not know.

Mr. FREAR. Had he been up to your camp?

Mr. CHISHOLM. No, sir; I invited him to go to the camp and see the conditions we were working under right at that time. It was right in the wet weather, the railroads were all tied up around Seattle, you could not get in or out for the floods, and our conditions were the same. He says, "Oh, I have been in logging camps." That is all the satisfaction I got, that is all he said, "I have been in logging camps."

Mr. FREAR. When was this?

Mr. CHISHOLM. This was a year ago last January.

Mr. FREAR. January, 1918?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. Did the loggers offer to render any help at that time, or what was said?

Mr. CHISHOLM. Why, they were doing the best they could. Mr. Cobb was on a committee at that time, and he resigned; he would not have anything more to do with it. He had men out looking over the territory where they could get spruce. That is what he told Col. Disque there that day, and Col. Disque said, "I will put 10,000 men in the woods riving; you fellows are not trying to do anything." Some one asked him how much he would cut per man, how many feet he would cut a day riving, and he said, "Nine hundred." Naturally, all laughed. They said, "That is more less than we are getting per man." He came down to 500, and finally down to 200. They had some statements there from Grays Harbor, where they had a cruise, that they would only average 35 feet per man.

Mr. FREAR. How many men do you average to the log in ordinary logging operations—how many feet to a man?

Mr. CHISHOLM. It varies; sometimes 7 and sometimes 10, or 12, or 15.

Mr. FREAR. I mean the average?

Mr. CHISHOLM. Probably around about 1,000 feet per man is considered good, fair logging—an average of 1,000 feet per man.

Mr. FREAR. A question was asked you whether or not you met with temporary delay from winds at times?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. How often would that come?

Mr. CHISHOLM. Oh, that varies. You have just got to tow-catch the tides right, and the weather, and get through.

Mr. FREAR. Would it be once a week or once in two weeks or how often?

Mr. CHISHOLM. It might be—you might lay up two weeks, and then you might not have any trouble for two weeks. We towed about 160 rafts last year.

Mr. FREAR. How long did it take the raft to reach the mills, on an average?

Mr. CHISHOLM. Oh, it varies from three or four days to two weeks.

Mr. FREAR. Three or four days to two weeks?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. You keep a number of rafts going, do you?

Mr. CHISHOLM. Yes; we have two tugs of our own.

Mr. FREAR. If there were slides in railways, and if bridges were washed out, you would have the same trouble, wouldn't you?

Mr. CHISHOLM. Yes.

Mr. FREAR. Do you know anything about the experience with those along the railroad that has been built?

Mr. CHISHOLM. They have had their bridges washed out. I don't know whether it was temporary bridges, but they were washed out two or three times. One bridge, it washed out twice, the false work, and the other one was washed out once, I believe. They have had some big slides on that road up there—one; they were working at it, cleaning it out. I travel backward and forward there. I don't pay much attention to it.

Mr. FREAR. You think there is difficulty in all kinds of operation?

Mr. CHISHOLM. Yes.

Mr. FREAR. Whether by water or land.

Mr. CHISHOLM. They have the same trouble in the Sound, in the protected waters, that the tugs will be laid up here two weeks with a raft, delivering it to a mill.

Mr. FREAR. Did you have any boys in the service?

Mr. CHISHOLM. No, sir.

Mr. FREAR. If you had a boy over at the front in France, who was fighting over there, at a dollar a day, drafted, compelled to go, would you have felt he was getting a square deal if the boys around you were getting paid civilian wages, without danger?

Mr. CHISHOLM. I would not think he was getting a square deal; no, I would not. We talked that over a good many times at the camp, about that; but, under the circumstances, why, I kind of think those fellows were entitled to their pay.

Mr. FREAR. You would think a man at the front, in a trench, who was risking his life day by day, that he was entitled to a good deal more than he was getting, wouldn't you?

Mr. CHISHOLM. Yes.

Mr. FREAR. So that is the standard you fix it upon, because he is taking the risk and it is a good deal—

Mr. CHISHOLM. I claim that the men who came back from the trenches were not used right.

Mr. FREAR. If they were paid \$10 a day, it would not compensate them for the risk?

Mr. CHISHOLM. No, sir; no.

Mr. FREAR. So it is on that basis that you are estimating that the man here was worth more, so far as his labor was concerned?

Mr. CHISHOLM. Yes.

Mr. FREAR. But it was not that he was—

Mr. CHISHOLM. Not that he was entitled to it.

Mr. FREAR. Compared with the man who was over there?

Mr. CHISHOLM. Yes, sir.

Mr. FREAR. And we had 2,000,000 over there?

Mr. CHISHOLM. Yes.

Mr. FREAR. And you had a few thousand men here.

Mr. CHISHOLM. Yes, they had—most of them were culls that they would not send overseas.

Mr. FREAR. That is, you are speaking in logging terms now?

Mr. CHISHOLM. Yes.

Mr. FREAR. Or lumbering terms. What did the officers do, that were working there, or around there? You said you had a great many officers, at times.

Mr. CHISHOLM. Oh, they would look around and look wise, and that is about all.

Mr. FREAR. They were not drawing civilian wages?

Mr. CHISHOLM. No. I had one fellow come up to the camp there at the time these men were tenting—living in tents, eating down there and not getting anything to eat—he came up to me and told me to have his beefsteak cut up at our camp and sent down to him. I told him the beefsteak would come down in the quarter, just as we got it, and he could cut it up to suit himself down there.

Mr. FREAR. Do you know whether these officers were Regular Army officers, or were they men who had been brought out here and had been given commissions by Disque?

Mr. CHISHOLM. Most of them were—there was no Regular Army man down there, that I know of, only one—two—the latter part we had a—

Mr. FREAR. That is, they were men who had seen no military service?

Mr. CHISHOLM. Yes.

Mr. FREAR. They were brought out here and put in charge of these crews?

Mr. CHISHOLM. Yes, sir; knew nothing about the business.

Mr. FREAR. I don't speak altogether, but I mean as a class.

Mr. CHISHOLM. Yes.

Mr. FREAR. That is your judgment?

Mr. CHISHOLM. Yes; yes, sir.

Mr. LEA. What was the least number of soldiers you had there at any one time?

Mr. CHISHOLM. The least number?

Mr. LEA. Yes.

Mr. CHISHOLM. Oh, well, when we first started our camp, after Christmas, we had 20; was the first bunch we got in, and then we kept going up.

Mr. LEA. To about 150?

Mr. CHISHOLM. Yes, sir; that is, that we employed in our camps and paid ourselves.

Mr. LEA. How many was the largest number of officers you had there at one time?

Mr. CHISHOLM. Oh, by gosh! I don't know; they were coming and going, and I couldn't keep track of them. I am not a resident all the time there; I am backward and forward; I travel backward and forward.

Mr. LEA. You have an office in Seattle, do you?

Mr. CHISHOLM. Yes, sir.

Mr. LEA. You stay here part of the time?

Mr. CHISHOLM. Part of the time. I am selling the logs, doing general business connected with the logging camps.

Mr. LEA. I presume that when you said that half as many officers as men, that facetious, wasn't it?

Mr. CHISHOLM. Yes.

Mr. LEA. In reference to the soldiers' pay, as I understand it, you don't criticize the Spruce Production Corporation for paying soldiers civilian wages?

Mr. CHISHOLM. Well, I don't know just hardly how to get at that.

Mr. LEA. Isn't this it: It may be that our soldiers fighting in Europe should have been paid more——

Mr. CHISHOLM. Yes.

Mr. LEA. But the fact that they should have been paid more is no reason why the soldiers producing aircraft lumber should not have been paid civilian wages?

Mr. CHISHOLM. Well, sure. I don't think that we could have worked in our camps without paying them, and they said to do it and we done it; that is all there was to it. We had no voice in it at all.

Mr. LEA. That is all.

Mr. FREAR. Let's see if that is true. You said how many, four-fifth of the men working in your camps were soldiers, is that about a fair proportion?

Mr. CHISHOLM. About two-thirds.

Mr. FREAR. Two-thirds. Supposing the Government had said these soldiers were to work there just as they said the soldiers were to dig trenches in Europe, what is the difference?

Mr. CHISHOLM. Well, if they told us that, that would have been different——

Mr. FREAR. Not you, but if they had told the soldiers that?

Mr. CHISHOLM. Well, that is up to the Government.

Mr. FREAR. It is up to the soldier to work?

Mr. CHISHOLM. Yes.

Mr. FREAR. And if he don't do it, he suffers court-martial, doesn't he?

Mr. CHISHOLM. I suppose so.

Mr. FREAR. It is military discipline.

Mr. CHISHOLM. Yes.

Mr. FREAR. It is not a question of dollars and cents?

Mr. CHISHOLM. No.

Mr. FREAR. That is what they found in the South, where they were concentrated in camps?

Mr. CHISHOLM. Yes.

Mr. FREAR. And the question of risk, of course, was far more serious in Europe, wasn't it?

Mr. CHISHOLM. Yes.

Mr. FREAR. And if you had a boy, you would rather have had him there, as far as safety was concerned?

Mr. CHISHOLM. Yes; sure.

Mr. FREAR. And those who had boys and were anxious for their safety would have preferred, so far as risk was concerned, to have given them any quantity of money here rather than go there?

Mr. CHISHOLM. Yes.

Mr. FREAR. So that with you it is just a question of whether or not they were getting as much as the civilian doing the work they were?

Mr. CHISHOLM. Yes.

Mr. FREAR. It is on that basis you are putting it?

Mr. CHISHOLM. Yes.

Mr. FREAR. But it is not taking into thought the military organization under which they were serving?

Mr. CHISHOLM. No; but we had no voice in it, anyhow. We were told to pay them so much wages, as I said.

Mr. FREAR. You had never employed soldiers before?

Mr. CHISHOLM. No, sir.

Mr. FREAR. They are not employed in any ordinary avocations, are they?

Mr. CHISHOLM. No, sir.

Mr. FREAR. Excepting in military work?

Mr. CHISHOLM. No, sir.

Mr. FREAR. They happened to be employed in shipbuilding, they were given wages there. They went so far, did they not, as to insure them against accidents, and that was under the cost-plus contracts here, was it not, or do you know?

Mr. CHISHOLM. I don't know about that.

Mr. FREAR. And the Government paid the insurance against accidents?

Mr. CHISHOLM. That may be; I don't know.

Mr. FREAR. But it didn't insure them against accidents over in France, where they were risking their lives.

TESTIMONY OF MR. H. A. LIGHTNER.

(The witness was sworn by Mr. Frear.)

Mr. FREAR. Your initials have been given, Mr. Lightner?

Mr. LIGHTNER. Yes.

Mr. FREAR. Where do you live?

Mr. LIGHTNER. Seattle.

Mr. FREAR. And what is your business?

Mr. LIGHTNER. Lumbering.

Mr. FREAR. How long has it been?

Mr. LIGHTNER. Between 13 and 14 years.

Mr. FREAR. Where have you been during that period?

Mr. LIGHTNER. I was in Wisconsin for about 10 years—between 9 and 10—and the rest of the time has been here on the coast.

Mr. FREAR. You have been lumbering in Wisconsin?

Mr. LIGHTNER. Yes, sir. Part of two years half my time was in the lumber business and half running another business.

Mr. FREAR. What particular line of the lumber business were you engaged in?

Mr. LIGHTNER. For six years I was——

Mr. FREAR. No; I mean since——

Mr. LIGHTNER. I did everything outdoors, all kinds of manual labor. The rest of the time I was in charge of various work, which was outdoors.

Mr. FREAR. What kinds of work?

Mr. LIGHTNER. Logging, sawmilling, and general work.

Mr. FREAR. Did you engage in building railways or have anything to do with that—logging roads?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Have you since you have been out here?

Mr. LIGHTNER. Yes.

Mr. FREAR. And you are connected with what company here?

Mr. LIGHTNER. C. A. Goodyear Lumber Co.

Mr. FREAR. That is working at Clallam Bay?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. What is your position with that company?

Mr. LIGHTNER. General manager of the Goodyear Logging Co. and assistant to the C. A. Goodyear Lumber Co.—assistant manager.

Mr. FREAR. What are the holdings, briefly stated, of the Goodyear Lumber Co.?

Mr. LIGHTNER. We own 25,000 acres, approximately, in Clallam County.

Mr. FREAR. Washington.

Mr. LIGHTNER. We are interested in redwood in California, and that tract is about fifty or sixty thousand acres. In Mississippi we have a tract, I think it is 40,000 acres; I am not sure about that. There is about 800,000,000 feet there.

Mr. FREAR. They conduct large operations?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And about what is your stand of timber over there in Clallam County—how many million feet?

Mr. LIGHTNER. Between a billion and twelve hundred million.

Mr. FREAR. Extends how far south?

Mr. LIGHTNER. South?

Mr. FREAR. From the Strait, from Clallam Bay—about, generally speaking?

Mr. LIGHTNER. Approximately 18 miles.

Mr. FREAR. Does it reach as far as this spruce tract which has been discussed here before the committee?

Mr. LIGHTNER. We own in that—we are on what is known as the "loop" northwest of Lake Pleasant.

Mr. FREAR. That is, in other words, you own timber in this tract?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. A portion of it?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. It is owned, generally speaking, by what other companies, in addition to yours?

Mr. LIGHTNER. The Lacey interests.

Mr. FREAR. That is the Clallam Bay Lumber Co.?

Mr. LIGHTNER. That is the Clallam Lumber Co. and the Ruddick-McCarthy.

Mr. FREAR. And the Milwaukee Railway?

Mr. LIGHTNER. The Milwaukee Land Co. owns some spruce over there; Campbell owns some; a man named Faircervice.

Mr. FREAR. Have you had any occasion to build any railroads for logging purposes during the last year or so?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Where and what kind of roads?

Mr. LIGHTNER. They were just back of Clallam Bay about 4 miles.

Mr. FREAR. How much roadway was built there?

Mr. LIGHTNER. We build between—oh, from 5 to 8 miles a year.

Mr. FREAR. Every year?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And have you made any examination to see what the cost of the railway building was in the last year?

Mr. LIGHTNER. I can tell you approximately. Approximately \$16,000 a mile.

Mr. FREAR. You have made an examination of that, have you?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And you have the various details of the building—

Mr. LIGHTNER. Yes.

Mr. FREAR (continuing). Figured out. That is of the building that you conducted?

Mr. LIGHTNER. Yes.

Mr. FREAR. Do you know anything about the line up toward this timber tract from Clallam Bay up the Hoko River?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. It has been surveyed, has it?

Mr. LIGHTNER. Surveyed by our company. We have a profile—it is a distance of a little over 9 miles to what is known as Hoko Falls, and we have a profile of that for over 8 miles—about 8 miles—between 7 and eight miles.

Mr. FREAR. How near is Hoko Falls to this timber?

Mr. LIGHTNER. It is within 3 miles of it—between $2\frac{1}{2}$ and 3 miles.

Mr. FREAR. Is that from Clallam Bay?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Have you got any figures showing the general character of the survey that was had there, as to elevations, as to the general condition surrounding the road, its rise and all that?

Mr. LIGHTNER. I have no figures with me, but I can give them to you.

Mr. FREAR. Just give them briefly, Mr. Lightner.

Mr. LIGHTNER. That railroad was designed to carry locomotives of 100 tons, and the maximum grade on it is about 2 per cent, with the empties—pulling the empties. It is less than 1 per cent coming out with the loads. At Hoko Falls, which is about 9 miles from Clallam Bay, we go over the falls at an altitude of about 1400 feet. At a point known as the Nelson claim, which is about in the heart of the loop, or that township, I think the altitude is about 440 feet. There are no difficulties above the Hoko Falls; the ground is fairly good.

Mr. FREAR. Has it any cuts of any importance?

Mr. LIGHTNER. There are some cuts and bridges in the first 9 miles, but nothing of a serious nature, so far as we have investigated.

Mr. FREAR. And that would carry it to this timber that has been spoken about?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And that is a road connecting at Clallam Bay, where operations have been carried on?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. What was the estimated expense of that road, if you know?

Mr. LIGHTNER. We figured that we could put that road to the edge of the spruce—

Mr. FREAR. That is, this spruce that has been discussed?

Mr. LIGHTNER. Yes.

Mr. FREAR. Near Lake Pleasant.

Mr. LIGHTNER (continuing). For between \$250,000 and \$300,000.

Mr. FREAR. With a road that would carry locomotives of the size that you have mentioned?

Mr. LIGHTNER. That was designed to run trains of 30 loads, which is about the average of loads that are pulled in this country.

Mr. FREAR. Thirty cars?

Mr. LIGHTNER. Thirty cars.

Mr. FREAR. Thirty cars, loaded with logs?

Mr. LIGHTNER. Yes, sir; that is a train.

Mr. FREAR. What would be the cost per mile? I didn't get the figures exactly.

Mr. LIGHTNER. That would be about twenty to twenty-five thousand a mile. That is what we figure to-day we could build that road for.

Mr. FREAR. For the 12 miles?

Mr. LIGHTNER. Yes.

Mr. FREAR. You figure that that can be done to-day?

Mr. LIGHTNER. Yes, sir; I do.

Mr. FREAR. What are the costs to-day as compared with last year?

Mr. LIGHTNER. Well, they are a little higher.

Mr. FREAR. Higher now than then?

Mr. LIGHTNER. A little bit, not—

Mr. FREAR. Due to what?

Mr. LIGHTNER. Well, we are paying our labor a little more.

Mr. FREAR. You pay labor higher now than you did in 1918?

Mr. LIGHTNER. Yes.

Mr. FREAR. So that it could have been constructed in 1918 if anything a little lower than that?

Mr. LIGHTNER. I will qualify that statement. In the latter part of 1918 we paid our station men a little higher wage, due to the fact that we were in close proximity with this Government railroad, and that necessitated a little bit higher scale on station work.

Mr. FREAR. Are you familiar with this statement? [Handing paper to witness.]

Mr. LIGHTNER. Yes, sir; I have seen this. This was gotten out by a group of loggers, just for general information.

Mr. FREAR. This statement, marked for identification "L," contains a statement of roads built by 14 companies that are reporting. For what time was this, for what year?

Mr. LIGHTNER. I think that was 1918.

Mr. FREAR. Last year. It gives the distance in miles reported by each company, the amount of powder furnished, and the different expenditures—for the purpose of grading, is this?

Mr. LIGHTNER. Yes, sir. If I can just look at it a second, I am not [examining paper].

Mr. FREAR. And it reaches over 73 miles, the total?

Mr. LIGHTNER. That is the grade ready for the rail.

Mr. FREAR. That is the grade, ready for the rail. What rails are usually put in on these roads?

Mr. LIGHTNER. We are using 60-pound steel. I think most logging companies are using 56 to 60 pound.

Mr. FREAR. What was the weight figured on for the railroad that you spoke of?

Mr. LIGHTNER. Sixty-pound.

Mr. FREAR. Sixty pounds—the one that was proposed up to this timber tract?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. This average per station under all conditions, of all these various roads that were built by the different companies, averages \$67 per station, according to this statement. A station is 100 feet?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And that would be practically how much per mile?

Mr. LIGHTNER. Well, that is 52 times that, whatever that is.

Mr. FREAR. In the neighborhood of \$3,300 per mile?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Now, what is to be added to that in the construction of the road in the matter of expense?

Mr. LIGHTNER. The ties and the steel and the ballast.

Mr. FREAR. Have you made any computation of those matters to know what it would cost on that basis of \$3,300 for the grading to know what the road would cost then—in general figures?

Mr. LIGHTNER. Well, that was about twenty to twenty-five thousand dollars a mile. That is the way we figured it, to be safe.

Mr. FREAR. Yes. I am speaking about this statement we have here now, \$3,300 per mile for grading; I am trying to get now the cost per mile of these roads. Did these roads pay \$25,000 per mile?

Mr. LIGHTNER. No, sir; I don't think so.

Mr. FREAR. That is it. I am trying to show about what would be the cost of rails, of ties, and the various items that go to make up the building of a road, in addition to the \$3,300 which goes for grading, according to this average of the 14 companies.

Mr. LIGHTNER. Well, you can figure—my estimate would be you can figure 2,500 ties to the mile, at about 40 cents.

Mr. FREAR. Well—

Mr. LIGHTNER. That is, delivered to right of way.

Mr. FREAR. Yes.

Mr. LIGHTNER. Hewed ties.

Mr. FREAR. And what else?

Mr. LIGHTNER. Steel—60-pound steel to-day is—relayers are \$60 a ton.

Mr. FREAR. What was it last year?

Mr. LIGHTNER. I think it was as high as \$75 to \$78.

Mr. FREAR. It was a question of priorities entirely, at that time, as to whether you could buy it at all or not?

Mr. LIGHTNER. Yes, sir.

Mr. LEA. What is meant by "relayers"?

Mr. LIGHTNER. That is steel that has been used and taken up and then resold.

Mr. FREAR. What is the condition of that steel—that is, I mean the steel rail that would be bought?

Mr. LIGHTNER. Well, I just bought 100 tons of steel, and there is some of that rail that has never been used. Once in a while—I have 200 tons of that. I got 100 tons from a mine that had failed, over in Idaho some place.

Mr. FREAR. Would that steel, if it was laid by the loggers, be able to carry out the logging operations for a year or more?

Mr. LIGHTNER. It always has. They are all using it.

Mr. FREAR. With these locomotives of the size of which you spoke, 100 tons, I think it was?

Mr. LIGHTNER. Yes, sir. They will pull a train of 30 loads.

Mr. FREAR. And over rails of this kind?

Mr. LIGHTNER. Yes.

Mr. FREAR. That is generally in use for that purpose?

Mr. LIGHTNER. The exact weight of the locomotive we had was 110 tons, a Baldwin, a rod engine.

Mr. FREAR. How many engines do you have?

Mr. LIGHTNER. We have only two.

Mr. FREAR. And how many cars?

Mr. LIGHTNER. Forty cars.

Mr. FREAR. And how much do you log a year, on the average, at your camp?

Mr. LIGHTNER. We log from twenty-five to thirty-five million.

Mr. FREAR. And you ship it how?

Mr. LIGHTNER. We bring it to Clallam Bay, raft it——

Mr. FREAR. Bring it to Clallam Bay on the rail——

Mr. LIGHTNER. On the railroad, and raft it, and then it is brought to Seattle and distributed.

Mr. FREAR. To the different mills?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. How many logs have you shipped since your company has been established there, in general, round numbers?

Mr. LIGHTNER. Between seventy-five and a hundred million.

Mr. FREAR. You have rafted it all?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. How many rafts have you lost?

Mr. LIGHTNER. Never lost any.

Mr. FREAR. And you have sent how many here?

Mr. LIGHTNER. Well, we have sent about 100 rafts, I would say. You see, our rafts are large. We get about 800,000 and sometimes as high as 1,200,000 in a raft.

Mr. FREAR. That is, your raft is built by loading the logs on top of the raft?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. And, of course, it draws a greater——

Mr. LIGHTNER. Amount of water.

Mr. FREAR. Yes.

Mr. LIGHTNER. About 14 feet.

Mr. FREAR. That is, it is built up more like a solid mass of logs?

Mr. LIGHTNER. Yes, sir.

Mr. LIGHTNER. We have lost logs off of rafts.

Mr. LIGHTNER. We have lost off of rafts.

Mr. FREAR. They drop off of cars——

Mr. LIGHTNER. Yes, sir.

Mr. FREAR (continuing). Occasionally.

Mr. LIGHTNER. In that connection, I have had—I had a raft of logs that was not mine, the logs were sold, and the only raft we have ever had break up broke up in the inland waters here, in Deception Pass, inside; went on the beach. I think you will find that

there are as many logs lost up in the protected waters; they are lost at all times.

Mr. FREAR. You were delayed by storms, I believe, as has been suggested?

Mr. LIGHTNER. In the year 1917 I kept a tow record on the tow-boat company, and we figured our actual time from the time the tug left Clallam Bay until it got to its destination at Seattle, and our running time was a little over five days for a distance of 120 miles. That includes coaling tug and every contingency that could arise.

Mr. FREAR. What proportion of the entire time would you say was interfered with by storms?

Mr. LIGHTNER. Very little.

Mr. FREAR. What would you say was interfered with by storms—one day out of seven, or how much, or one day out of how many days on an average? Of course it does not have to be accurate, but I want to get the general condition.

Mr. LIGHTNER. That particular year we logged practically the whole year, and I do not imagine our delay in actual days would be more than about 20 days in the year.

Mr. FREAR. How would that average?

Mr. LIGHTNER. With other days, do you mean?

Mr. FREAR. No; with other years.

Mr. LIGHTNER. That was a fair average.

Mr. FREAR. Do you know anything about this Kerbaugh road?

Mr. LIGHTNER. I have been along it.

Mr. FREAR. Have you been along it recently?

Mr. LIGHTNER. I have been along it mostly in crossing Lake Crescent. I have never been over the road from Lake Crescent to Lake Pleasant. I have been over one spot of it when it was being graded.

Mr. FREAR. Do you know anything about whether this railroad put through Lake Pleasant by Lake Crescent has had any slides?

Mr. LIGHTNER. I saw one slide on the lake that occurred last winter which washed between 200 and 300 feet of track, that slid right into the lake.

Mr. FREAR. What time was that, about?

Mr. LIGHTNER. It probably occurred around the first of the year some time.

Mr. FREAR. Now, the railroad is built along the border of Lake Crescent, isn't it?

Mr. LIGHTNER. Yes.

Mr. FREAR. And Lake Crescent is a little lake there of 7 or 8 miles, something like that?

Mr. LIGHTNER. I have been told it is 12 miles long.

Mr. FREAR. And this railroad runs along the north side of the lake?

Mr. LIGHTNER. Yes.

Mr. FREAR. And the hills or mountains reach what height, would you say, or have you noticed them, generally speaking?

Mr. LIGHTNER. I imagine some of those peaks are 3,500 feet.

Mr. FREAR. Three thousand, five hundred feet—the peaks or mountains?

Mr. LIGHTNER. Yes.

Mr. FREAR. And this road runs along the base of them?

Mr. LIGHTNER. Yes.

Mr. FREAR. And from your experience in railroad construction—and you have had some, as you state—what would you say as to the liability of slides where this railroad is built at the foot of these mountains, considering the soil as you have observed there? I am not asking for an expert opinion, but you have seen it, and what do you think about the condition there?

Mr. LIGHTNER. I think that the railroads would slide when they are first built, due to the jarring of the powder from blasting. That is what caused that slide. After you clean it out a few times you are done with your troubles at that point.

Mr. FREAR. What is the character of the soil that came down with the slide?

Mr. LIGHTNER. At that particular place it was mostly rock.

Mr. FREAR. Soft soil, is it, along there?

Mr. LIGHTNER. Part of the way is soft or clay soil and the rest of it is rock.

Mr. FREAR. At some places they cut through the rock.

Mr. LIGHTNER. Yes; there are two tunnels, I believe.

Mr. FREAR. You were at Port Angeles. Have you had any experience there?

Mr. LIGHTNER. Just passed through.

Mr. FREAR. Do you know anything about the conditions there for a mill, whether that mill is particularly exposed, or what the conditions are—where this Siems-Carey-Kerbaugh mill was built, I mean?

Mr. LIGHTNER. Yes; that is exposed to the northeast and it is partly exposed to the northwest, to the swell from the ocean. There is a ground swell comes in there.

Mr. FREAR. That is about the only place where they have any mills on the straits, is it not, at Port Angeles?

Mr. LIGHTNER. On this side, as far as I know.

Mr. FREAR. Do you know of any bridges being washed out on this Siems-Carey-Kerbaugh road?

Mr. LIGHTNER. I think that on the Sol Duc River when the first freshets came last fall I understand that two bridges went out on the Sol Duc River. One of them, I think, was completely out and the other partially out.

Mr. FREAR. That is rather a good-sized stream.

Mr. LIGHTNER. Yes; it is a pretty good-sized river.

Mr. FREAR. Larger than any of the other rivers around that part of the peninsula.

Mr. LIGHTNER. I have never been to the Hon River, but I understand they are about the same size.

Mr. FREAR. How does it compare with the Hoko River?

Mr. LIGHTNER. The Hoko is a smaller river.

Mr. FREAR. Is there anything else that you think of that I have not brought out, Mr. Lightner, in regard to the cost of railway that you can give to the committee as general information?

Mr. LIGHTNER. I can give you the cost of our main line railroad at Clallam Bay, if you would like to have it.

Mr. FREAR. I would be glad to have that.

Mr. LIGHTNER. December 15, 1915, 6½ miles of road built, graded, steel laid, and ballasted; 1½ of additional miles road graded.

Mr. FREAR. That same year?

Mr. LIGHTNER. Yes.

Mr. FREAR. What did the 6½ miles cost; that is, completed? The next you are going on is an incomplete road?

Mr. LIGHTNER. I am going to deduct that.

Mr. FREAR. All right.

Mr. LIGHTNER. The material, rails, spikes, bolts, switches, throws, and stands, \$18,080; ties, \$5,700; total, \$23,780. Labor: Clearing right of way, \$14,875.85; grading, \$28,887; laying steel, \$3,505.30; ballasting, \$7,835.44; total, \$54,603.59. Sundry charges, \$19,505.16, making a total of \$98,188.75, less 1½ miles of grade, \$5,322.50, leaving \$92,866.25. By way of explanation: In building that railroad we intersected the county road at Clallam Bay for about 2 miles or a mile over. It is about 2 miles, and I deducted \$12,500 for that.

Mr. FREAR. For what reason?

Mr. LIGHTNER. Because we practically had to build twice as much grade there. That left \$80,366.25, or a cost per mile of \$12,364.

Mr. FREAR. That was in 1915?

Mr. LIGHTNER. That was in December, 1915.

Mr. FREAR. Now, that is 60-pound rails.

Mr. LIGHTNER. That is 60-pound rails with sawed ties.

Mr. FREAR. In 1916 or 1917 or 1918 have you any figures? Just bring it up to 1918 if you have the figures there.

Mr. LIGHTNER. I have not any figures for 1918. You mean just this road?

Mr. FREAR. Any road building you had there.

Mr. LIGHTNER. Our road had been costing us approximately \$16,000 a mile, and it is a little heavier this year.

Mr. MAGEE. What year?

Mr. LIGHTNER. 1918.

Mr. FREAR. Can you give any estimate as to the average cost of those roads—that is, adding to the grading? Now, that shows grading in that statement that has been handed us of \$3,300. Now, what would be the cost of the road per mile on that basis?

Mr. LIGHTNER. It takes about a 60-pound rail and would take a little less than 100 tons to the mile.

Mr. FREAR. We would have to go and figure it all out. Can't you give the committee the general amount that it would cost per mile without going through all of that? You have had the experience and you can give us the figures just the same on that as on any other grade.

Mr. LIGHTNER. I would call it about \$16,000.

Mr. FREAR. Those roads there would average about \$16,000 per mile?

Mr. LIGHTNER. Yes. Our station work runs from about \$65,000 a station up to \$85,000 a station. That was in 1918—this statement.

Mr. FREAR. I will introduce that in the record as an exhibit showing 14 different companies and their operations in railway construction.

(The above paper was introduced in evidence and marked "Exhibit L" for identification Aug. 22, 1919.)

Mr. FREAR. Where are these companies, generally speaking?

Mr. LIGHTNER. I think that was taken from companies all around Puget Sound.

Mr. FREAR. What has been the attitude of the loggers in their desire to help the Government in the production of spruce, as far as you know?

Mr. LIGHTNER. I think they tried to do all they could.

Mr. FREAR. What has been your own experience in regard to it?

Mr. LIGHTNER. We got out all the spruce we could. We tried to put this Hoko Road up to Col. Disque a couple of times, but we seemed to be unsuccessful.

Mr. FREAR. Just tell the committee, briefly, what you did in regard to this Hoko road—this 12-mile road from Clallam Bay up to the spruce belt.

Mr. LIGHTNER. Yes.

Mr. FREAR. Which was an additional road by the Siems-Carey road of 36 or 38 miles.

Mr. LIGHTNER. Yes. When Mr. Hawkins was in charge and was sent here from Washington, after the trip, I think that was in the latter part of 1917, he came to Seattle and I called on him, and with him was a lieutenant named Crisp and a lieutenant named Powell—I think his name was Powell. I showed him a map of where our spruce was that the company owned, and I told him that I thought he probably was summing up the whole situation, and that we would start a survey of a road into that timber and have the information for them if they wanted it.

Mr. FREAR. That was in your own timber, wasn't it?

Mr. LIGHTNER. Yes; that was in our own timber.

Mr. FREAR. That is, in the particular tract of timber that they have reached through this road to Lake Pleasant?

Mr. LIGHTNER. Northwest of Lake Pleasant.

Mr. FREAR. What occurred there?

Mr. LIGHTNER. After that we went to work and we surveyed that road just as soon as we could get our engineer off of the work that we were doing.

Mr. FREAR. That was 1918?

Mr. LIGHTNER. That was 1918 that we did that work. The work was mostly in the fall of 1917. As time went along, I think it was in 1918, I had met Col. Disque prior to this at different times, around, when he was here on different matters, and I told him that we were working on that, and if they would consider one of the tracts they wanted to go into, that we would try to cooperate with them. Last April, a year ago—that would be 1918—I made an appointment with Col. Disque over the telephone, or by wire, and I told him we heard that there was some talk of putting a railroad into that country.

Mr. FREAR. That is in 1918?

Mr. LIGHTNER. Yes. Mr. Goodyear, and Mr. Fairservice, and myself went to Portland on our way to California, to see Col. Disque. We got to Portland, and Col. Disque advised us that he could not see us, as he had to go to Tacoma, I believe. We had a very short time and we had advised him of this the day before.

Mr. FREAR. Did you meet him?

Mr. LIGHTNER. No, sir. So we talked to a man named Hutchinson. He talked to us in a general way about the railroad, and asked us what we thought it would cost, and we told him we imagined

that railroad could be put in there for a half a million dollars to the edge of the spruce. We allowed approximately \$250,000 for the rush that would be necessary to get in. He presented a contract that was generally known there, similar to one that had been offered to other loggers, and we told him that we could not do that, because it was uncertain.

Mr. FREAR. What kind of a contract was it?

Mr. LIGHTNER. As I remember it, we had to put up a bond, and then we paid the money back out of our logs.

Mr. FREAR. What kind of contract was it?

Mr. LIGHTNER. I did not see the contract that day. I have never seen one, in fact. It was just verbal. And we told him we thought the best way to handle that would be for the Government to give us the money under their supervision. It naturally would come under their supervision, and that is what we were afraid of; and we might start that railroad and get in and be put to extra expense.

Mr. FREAR. Had you heard anything about your immediate neighbors, Merrill & Ring, and their experience?

Mr. LIGHTNER. Yes; and that was what I was afraid of.

Mr. FREAR. Now, what occurred?

Mr. LIGHTNER. Mr. Hutchinson told us that it could not be done without an act of Congress; I think that was the remark he made. And we also stated that at the end of the war we would be glad to take that off their hands if they would take the shrinkage out of it. That was about all the conversation. I went to California to our Greenwood plant, and while I was there I received a telegram which I think was signed by Col. Disque, saying he was sorry that he had not met Mr. Goodyear and myself, and wanted to know if there was anybody up here that he could treat with or deal with on this proposition. Mr. Goodyear wired him that Mr. Lightner would be here at all times and that he could deal with him.

Mr. FREAR. Referring to yourself?

Mr. LIGHTNER. Yes. That is the last that I ever heard of it.

Mr. FREAR. You never received any communication from G. N. Disque.

Mr. LIGHTNER. No, sir; not to my knowledge.

Mr. FREAR. Now, this railroad, as I understand, could in ordinary times have been built for about \$300,000 up to this tract of timber from Clallam Bay, but you at this time, because of the unusual demand, raised it to \$500,000.

Mr. LIGHTNER. Yes.

Mr. FREAR. That would be 40 per cent increase?

Mr. LIGHTNER. We figured it at about 50 per cent. We figured it at about \$250,000 at that time. We added about \$250,000 for rush. I should have said 100 per cent.

Mr. FREAR. What do you mean by rush?

Mr. LIGHTNER. That was for the speed that we would have to go at it to do it. We would have to build that faster than under ordinary conditions, and necessarily have a little more expense to do it.

Mr. FREAR. You had figured a safe margin? You fixed the margin at a 100 per cent increase, because you had made a survey the year before and it was based upon your previous construction?

Mr. LIGHTNER. Yes.

Mr. FREAR. And that was only 12 miles?

Mr. LIGHTNER. Yes.

Mr. FREAR. What was the experience of other loggers, so far as you know, in regard to this same question of making your offers of assistance?

Mr. LIGHTNER. Well, I think young Mr. Henry, jr., made a trip up the Hoko in the fall of 1917.

Mr. FREAR. Who was Mr. Henry?

Mr. LIGHTNER. They are in business here in Seattle, railroad contractors, real estate, and general business, and they own timber in Clallam County right near this. They went up there and made some investigation, but how far they carried I don't know.

Mr. FREAR. They went up where?

Mr. LIGHTNER. Up in the Hoko.

Mr. FREAR. Do you know anything about what their relations were with Disque or any of these people?

Mr. LIGHTNER. No; I do not.

Mr. FREAR. That is what I had in mind. You cut logs for the Spruce Production people, did you? You cut spruce logs?

Mr. LIGHTNER. The Anacortes Lumber & Box Co.—they had a contract, as I understand.

Mr. FREAR. Whereabouts is Anacortes?

Mr. LIGHTNER. Anacortes is this side of Bellingham.

Mr. FREAR. That is north from here how many miles?

Mr. LIGHTNER. I guess it is about 70 miles north of here.

Mr. FREAR. That is the only spruce production that you were called upon to make for the Government?

Mr. LIGHTNER. Yes. I will explain that to you. We had been furnishing the Anacortes Lumber & Box Co. from the year 1915 with spruce as it developed in our timber. The mills had contracts here, I believe, to furnish spruce, and when they had their contracts signed they asked us how much spruce we would furnish and to give them an estimate of what it would be.

Mr. FREAR. You were cutting spruce all the time with other timber?

Mr. LIGHTNER. Yes.

Mr. FREAR. What proportion of your timber, generally speaking, is spruce?

Mr. LIGHTNER. It varies. In the tract we are in it runs from 10 to 15 per cent of the entire tract.

Mr. FREAR. It runs a little stronger than it does in this Lake Pleasant region?

Mr. LIGHTNER. Yes.

Mr. FREAR. What is the general character of the spruce that you are cutting now?

Mr. LIGHTNER. Very good.

Mr. FREAR. That is near Clallam Bay?

Mr. LIGHTNER. Yes.

Mr. FREAR. That is good spruce?

Mr. LIGHTNER. Yes.

Mr. FREAR. Have you ever received any request from the spruce people, that is, representing the Government, to enter into any contract for the cutting of spruce or doing anything?

Mr. LIGHTNER. Not to my knowledge.

Mr. FREAR. Col. Disque or anyone else representing him never got in touch with you from that time when you say Mr. Goodyear telegraphed him?

Mr. LIGHTNER. No, sir.

Mr. FREAR. What else did you have in mind, Mr. Lightner, that might be enlightening to the committee?

Mr. LIGHTNER. I think that spruce could have been taken down the Hoko River and delivered to Seattle or any place at much less expense. My testimony will bear that out, I guess.

Mr. FREAR. What would you say as to the expedition in getting that out and getting it into market and getting it to the mill?

Mr. LIGHTNER. I would have hauled it to Clallam Bay and then have towed it to the various sawmills and let them saw it.

Mr. FREAR. There are plenty of sawmills to do that?

Mr. LIGHTNER. Yes.

Mr. FREAR. They were not engaged in sawing spruce except as it came incidentally in commercial business?

Mr. LIGHTNER. That is right.

Mr. FREAR. How long a time, generally speaking, would it have been from the time the spruce was loaded on the cars until it could have been placed in the mills?

Mr. LIGHTNER. It would have been continuous. After our chain starts we have no stop, the same as it would be on a railroad, absolutely.

Mr. FREAR. So that there is no difference in carrying it, except it is a decrease charge, is it not, for the rafting; that is, that is cheaper than railroad expenses—is that right?

Mr. LIGHTNER. Yes; I figured to-day that I can haul heavier bench timber which is right near Lake Crescent to Port Angeles for a dollar a thousand less by way of Clallam Bay than by way of the railroad that is now built, known as the Seims-Carey Road.

Mr. FREAR. Then you have not any fear of competition in that line?

Mr. LIGHTNER. No, sir.

Mr. FREAR. And that is the road that could be given away to some one at 10 per cent of its reproduction value?

Mr. LIGHTNER. I am not worrying even then.

Mr. FREAR. That is to say, you people are business people that have been in the logging business for years, and you understand the conditions that surround you and the competition that exists?

Mr. LIGHTNER. Yes.

Mr. FREAR. And you make that statement on that basis?

Mr. LIGHTNER. Yes; as an economic proposition it was apparent to me that it would be more economical to bring that timber to Clallam Bay.

Mr. FREAR. What was the experience of these people who came here and received the contract, so far as you know, the Seims, Carey Kerbaugh Co., who received the \$25,000,000 contract? Do you know anything about them as to their experience?

Mr. LIGHTNER. Not a thing. I understand they had a contract in China to build a railroad, but outside of that I knew nothing of them.

Mr. FREAR. I am speaking of the spruce end of it. You do not know that they had any experience in that line?

Mr. LIGHTNER. No, sir; I know they hired my superintendent as assistant to Mr. Donlin to help with the work.

Mr. FREAR. Was he the man that came from Montana?

Mr. LIGHTNER. I believe he was.

Mr. FREAR. Do you know what place in Montana he came from? Was it Missoula, Mont.?

Mr. LIGHTNER. I have heard he was from Missoula, Mont.

Mr. FREAR. And they took your superintendent in that way?

Mr. LIGHTNER. They hired him, as I understand it, and told him to take charge of the logging.

Mr. FREAR. Of all the logging?

Mr. LIGHTNER. Yes; as I understand it.

Mr. FREAR. You must have had a good man, then?

Mr. LIGHTNER. He did good work for me in a smaller camp.

Mr. FREAR. Did he work for them thereafter?

Mr. LIGHTNER. Yes; he worked for them.

Mr. FREAR. Did they pay him more, or what was the reason?

Mr. LIGHTNER. When he told me he was going to resign I understood him to say, if I remember him correctly, that they were going to pay him \$10,000 per year, when I was paying him \$425 a month.

Mr. FREAR. That is, it was a jump from a little over \$5,000 a year to \$10,000 a year?

Mr. LIGHTNER. Yes. Whether he got it I do not know.

Mr. FREAR. That is what he stated to you, is it?

Mr. LIGHTNER. Yes.

Mr. FREAR. And you could not stand that kind of competition?

Mr. LIGHTNER. No, sir.

Mr. FREAR. The Government competition was a little too heavy for you?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. What have you said about the Port Angeles lumber? Was it necessary to cut spruce, or was there sufficient milling capacity around to take care of all the spruce that might be shipped?

Mr. LIGHTNER. My judgment was that there were enough mills to saw the spruce in any way the Government wanted.

Mr. FREAR. The Government was empowered, as you understood, to commandeer all the industry if it was necessary?

Mr. LIGHTNER. That was my understanding.

Mr. FREAR. To bring out the spruce. So that if you had a logging outfit they could have told you people to get out spruce?

Mr. LIGHTNER. Yes.

Mr. FREAR. And they could have told the mills at Port Angeles, or any other mills, to cut the spruce?

Mr. LIGHTNER. Yes, sir; that is my understanding.

Mr. FREAR. The statement of the Spruce Production Division is that 3,000,000 feet of logs are cut every day in the States of Washington and Oregon, and if that is true there would be a total sawing capacity of in the neighborhood of 9,000,000,000 feet a year on an 8-hour day, if we can compute correctly on 300 days' work?

Mr. LIGHTNER. Pardon me for interrupting; two or three million a day?

Mr. FREAR. Three million a day.

Mr. LIGHTNER. It is more than that.

Mr. FREAR. About what?

Mr. LIGHTNER. We have some figures compiled for the sawmills adjacent to tidewater in the year 1917. I can give you those figures if you would like to have them.

Mr. FREAR. What is the total?

Mr. LIGHTNER. The sawmill capacity on a 10-hour day was 10,000,000 feet a day.

Mr. FREAR. On a 10-hour-a-day basis?

Mr. LIGHTNER. No; I should say 8,000,000; and I think the logging capacity was figured at 10,000,000.

Mr. FREAR. And on an eight-hour basis that would be about what; at least between six and seven or possibly eight million?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. So that if those mills were tested to their capacity or, anyway, if all the spruce had been available, they would have been able to put an airplane in the hands of every man on the front, would they not?

Mr. LIGHTNER. It looks that way.

Mr. FREAR. So was it necessary, in your judgment, to build a mill at Port Angeles?

Mr. LIGHTNER. I can not see that it was.

Mr. FREAR. If you had been backed by the Government on a cost-plus contract for building that road up the Hoko River, you would not have had any fears of beginning construction?

Mr. LIGHTNER. No, sir; not in the least.

Mr. FREAR. If you had had an opportunity to cut flitches on the same basis as the Siems-Carey-Kerbaugh Co., on the same basis, not as to the amount, would you have felt perfectly safe in the operation?

Mr. LIGHTNER. I think I would.

Mr. FREAR. Would it have been possible, in the judgment of the loggers and in the judgment of lumbermen of this country, that they could have gotten out the amount that was proposed by this Siems-Carey-Kerbaugh contract?

Mr. LIGHTNER. Not in the time. I think it was an impossible contract.

Mr. FREAR. Why?

Mr. LIGHTNER. Because it meant the building of a tremendous amount of logging spurs. There were so many practical difficulties that it would practically have been impossible to produce logs in the way that they had outlined.

Mr. FREAR. Just explain about logging. What is the average logging railway per section?

Mr. LIGHTNER. How much mileage?

Mr. FREAR. What is the mileage?

Mr. LIGHTNER. I figure about 4 miles, between 4 and 5 miles.

Mr. FREAR. Per section. How many sections, or how many townships were generally estimated to contain the bulk of this spruce?

Mr. LIGHTNER. I made some figures, and I figured that they would have to go into seven townships to get a billion feet of timber.

Mr. FREAR. To get out this spruce?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. How much spruce would that be?

Mr. LIGHTNER. That would just handle a camps contract.

Mr. FREAR. You mean the fitches contract?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. You mean spruce logs?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. You figure a billion feet of spruce logs could be gotten out to fill the Siems-Carey-Kerbaugh contract of 250,000,000 feet of fitches?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. How many miles of railway would it have taken to cover these seven townships of which you speak, in order to have secured enough logs to cover the amount of fitches named in the Siems-Carey-Kerbaugh contract?

Mr. LIGHTNER. I figured it up one time, and I think it would be close to a thousand miles. That is about 4 miles to the section.

Mr. FREAR. You figured from the standpoint of the logger?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Would it be a practical proposition or a physical possibility, judging from the experience of loggers and what you have seen of the operations of the Government through the Siems-Carey-Kerbaugh Co., to have put those railways in and to have gotten out those logs in a year and a half?

Mr. LIGHTNER. I do not believe it could have been done.

Mr. FREAR. Anything else you can think of?

Mr. LIGHTNER. Along that line, I made some figures, and if you would like to have them for your information I would be very glad to give them to you. I figured that out with two other men, one from the Columbia River, and one from Puget Sound. [Producing paper.]

Mr. FREAR. This is a statement of the estimates that you have made?

Mr. LIGHTNER. Yes, sir; that is the reason we figure it was rather an impossible contract over there.

Mr. FREAR. You can introduce this in the record instead of reading it and just state briefly what it is.

(The paper above referred to was marked "Exhibit N, Lightner, Aug. 22, 1919.")

Mr. FREAR. I can not understand what you have here. Some of those terms are loggers' terms. Will you tell us briefly what the general effect of that statement is, and it can be checked up?

Mr. LIGHTNER. We figured out the percentage of No. 1 spruce logs that was in the stand.

Mr. FREAR. In the stand where this timber is located?

Mr. LIGHTNER. Where this timber is located. Then we figured out the cants that could be gotten from that, and that was based on an actual scale of some of the logs that came from Merrill & Ring's camp and the Goodyear Rubber Co.'s camp. Then, we took the largest township in Clallam County, which has 250,000,000 feet of spruce, according to the county cruise, and called that 375,000,000.

Mr. FREAR. Why did you do that?

Mr. LIGHTNER. To give them the benefit of the doubt. We had heard reports that that amount of spruce was there, so we wanted to make sure.

Mr. FREAR. You put an outside figure?

Mr. LIGHTNER. Yes, sir; and we figured that out of that one township we would get 91,000,000 feet of airplane cants. Then we went on and took the average township and figured how it would figure on the average township. Then we took amount of railroad that was usually used to log a section of land and figured the number of townships that would be necessary to enter, and that is the way that we arrived at our mileage of railroad. We figured out 1,062 miles.

Mr. FREAR. Are these figures based upon a cruise you made in Clallam county, as to the amount of spruce?

Mr. LIGHTNER. We figured that the average stand of timber was approximately 40,000 feet to the acre.

Mr. FREAR. Of spruce?

Mr. LIGHTNER. No; of all species. Then we figured approximately 15 per cent of that stand is spruce, and that is the way we arrived at ours.

Mr. FREAR. How many feet of timber would be on this land of which you spoke where there were billion feet of spruce? As I understand it, you have been talking about logging a billion feet of spruce?

Mr. LIGHTNER. That would be 40 times 36, would it not? We did not figure on quite 40. There are 36 sections in a township.

Mr. FREAR. I understand you to say a billion feet of spruce are in these seven townships approximately.

Mr. LIGHTNER. Yes; that was the estimate.

Mr. FREAR. Was that a cruiser's estimate, or what?

Mr. LIGHTNER. We took the heaviest townships and sort of averaged it. You see, the stand is 40,000 and we figured the seven townships, and it averages about 15 per cent.

Mr. LEA. I think the statement explains the whole thing very succinctly.

Mr. FREAR. How many feet of timber would you have had to have logged on those seven townships to have gotten the timber off that included the spruce?

Mr. LIGHTNER. It runs about a billion feet to a township. I should say.

Mr. FREAR. That is about 7,000,000,000 feet?

Mr. LIGHTNER. Yes, sir.

Mr. FREAR. Seven billion feet would have to be brought out from there, in your judgment, to have gotten this billion feet of spruce?

Mr. LIGHTNER. If you logged all the woods.

Mr. FREAR. Are there any apparent difficulties in logging the spruce to the exclusion of the others, where it runs 15 per cent?

Mr. LIGHTNER. In other words, you mean the difficulties of selective logging?

Mr. FREAR. Yes.

Mr. LIGHTNER. I consider they are serious.

Mr. FREAR. Is it practicable?

Mr. LIGHTNER. No, sir.

Mr. FREAR. Is it practicable to have brought out such a quantity of spruce, from a logger's standpoint, under any circumstances?

Mr. LIGHTNER. I believe the best loggers will tell you that practically the entire stand of timber could have been logged about as

quickly as the selective logging. In other words, it would not have taken much more time to have logged the whole stand than it would to take out the spruce, and that timber there, the fir, was very desirable for shipbuilding, and the most practical loggers thought the fir ought to come right along with the spruce.

Mr. FREAR. I am trying to get at the practical operation of this contract which these people, who were not practical timbermen, had made. It was estimated that this road was at its extreme capacity without meeting with obstacles to carry out the million or million and a half feet of timber every day. If I get it right, it would have taken over two years if everything could have gone out clean. Am I getting the figures right?

Mr. LIGHTNER. To log 7,000,000,000?

Mr. FREAR. Yes.

Mr. LIGHTNER. It would take the output of the States for 7,000,000,000.

Mr. FREAR. How long would it have taken to have gotten with this single railway these logs?

Mr. LIGHTNER. You mean the spruce, or all?

Mr. FREAR. You say it is not practicable to log the selective spruce. I am trying to get at the elements here which entered into this contract, to see whether it could have been carried out.

Mr. LIGHTNER. It would have taken the whole industry a little over one year.

Mr. FREAR. The whole industry of Washington?

Mr. LIGHTNER. Yes; they produced about four to five billion feet.

Mr. FREAR. Then it would have taken the industries of Washington and Oregon together up in this clump of woods?

Mr. LIGHTNER. To bring out 7,000,000,000 feet.

Mr. FREAR. With this single line of road, that 38-branch road, would it have been practical?

Mr. LIGHTNER. No, sir.

Mr. FREAR. Could it have been done with four roads?

Mr. LIGHTNER. No, sir.

Mr. FREAR. Was it a practical possibility from the loggers' standpoint, from the standpoint of the man who actually does the work, to have gone into selective logging so as to have brought out a billion feet of spruce inside of one year, or two years, or three years?

Mr. LIGHTNER. I do not think so.

Mr. FREAR. Why?

Mr. LIGHTNER. Because I do not think it could be done.

Mr. FREAR. We all have our own judgment, but I wanted you to give the operation of taking the selective logging and the difficulties that would confront any man that was attempting to carry that out. It is apparent that it was impossible?

Mr. LIGHTNER. When you are logging, your business is moving all the time. You have to have your rail ahead and your grades ahead, and you can see the constant confusion of moving which would exist from some of that territory over there where they would have to go into that line of timber; there perhaps would not be more than 2 or 3 trees to the acre of spruce that they would want under the plan laid out.

Mr. MAGEE. You have in mind the building of this 1,062 miles of railroad?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. You could not have built those railroads within that time, could you?

Mr. LIGHTNER. I do not think so.

Mr. MAGEE. Let alone getting out any timber, could they?

Mr. LIGHTNER. I do not see how they could.

Mr. FREAR. But these men were not loggers who had taken this contract, and you say it would have tested the capacity of the whole State to have gotten out four billion feet of timber generally, of which usually 15 per cent is spruce, as I understand, as the spruce stands. But that railroad as built will be a very useful railroad if anyone wants it for transcontinental purposes or commercial purposes to-day?

Mr. LIGHTNER. It is a fine railroad.

Mr. FREAR. That is all.

Mr. LEA. Who was this superintendent of yours that was taken by Siems-Carey?

Mr. LIGHTNER. Fred McFarland.

Mr. LEA. He was superintendent of what operations at your mill?

Mr. LIGHTNER. Just superintendent under me, logging superintendent.

Mr. LEA. He was an experienced man in the business, was he?

Mr. LIGHTNER. Yes, he had had some practical experience.

Mr. LEA. How long had he been in your employ?

Mr. LIGHTNER. I think a year and a half.

Mr. LEA. Then it is a fair inference from your testimony that Siems-Carey-Kerbaugh had a good practical man to manage their logging operations?

Mr. LIGHTNER. He was a good man for a camp the size of mine.

Mr. LEA. He was satisfactory to you, was he?

Mr. LIGHTNER. Yes, sir; in most respects.

Mr. LEA. Did you consider taking over the Siems-Carey contract; were you interested in that at all?

Mr. LIGHTNER. No, sir.

Mr. LEA. You had nothing to do with that?

Mr. LIGHTNER. No, sir; not taking over the Siems-Carey contract.

Mr. LEA. For the logging contract?

Mr. LIGHTNER. Only in a general way. You see, we were logging spruce all the time; that being what was spoken of yesterday by Mr. Frost; we were asked if we would like to assist in that, and our answer was that we did not have the spare equipment at that time; because we were logging spruce in our own operations.

Mr. LEA. As I understand it, you did not want to take their contract?

Mr. LIGHTNER. We probably would not have moved from where we were logging spruce.

Mr. LEA. And the Spruce Production Corporation was taking all the spruce that was needed—that was delivered by any of the loggers?

Mr. LIGHTNER. The Spruce Production Corporation was taking it all.

Mr. LEA. What spruce was delivered, they took?

Mr. LIGHTNER. Yes; from the various mills.

Mr. LEA. The total product was being handled through the mills in Washington, and anyone who had a log that was suitable could sell it, as far as that was concerned?

Mr. LIGHTNER. Yes.

Mr. LEA. It was not practical, from the loggers' standpoint, to engage in selective logging in the forests? It was uneconomic in the handling of lumber? There is no doubt about that, is there?

Mr. LIGHTNER. No doubt at all. You see, I have a stand of timber that runs 30 per cent spruce. Suppose I had logged that selectively for the last year. I would have laid railroads in there and then moved them right out of that territory. If I wanted to go back this year, my stand would be depleted by 30 per cent. I would have to go and build all those railroads again, and then, when I had them in, on an even break I would be getting only 70 against 100.

Mr. LEA. You would be wasting time, and labor, and money?

Mr. LIGHTNER. Absolutely.

Mr. LEA. And the only justification you know of for selective logging would be the emergency of war on the assumption that you should get out more than by the other method?

Mr. LIGHTNER. I am not sure that that is practical now. It has never been proven.

Mr. LEA. If that was a fact, that would be the only theory on which you could justify it?

Mr. LIGHTNER. Yes.

Mr. LEA. And if you could produce that faster, it would be a war question; but whether it should be done as a business proposition, there is no question about its being uneconomical?

Mr. LIGHTNER. Raw material in this country is a very essential thing, and the stand of spruce in this country is very limited, and if we go in there and destroy these forests they are subject to fires after you have gone in and logged. That is where most of our fires start—in cutover land—and our fire hazard would be increased tremendously, and our material is liable to be all burned up.

Mr. LEA. Was any effort made by your company to engage in selective logging?

Mr. LIGHTNER. I do not think so.

Mr. LEA. And all the spruce production that you engaged in was in the course of your ordinary milling business?

Mr. LIGHTNER. Yes.

Mr. LEA. Was there any question about commandeering, in reference to your company?

Mr. LIGHTNER. There was our timber.

Mr. LEA. What was that?

Mr. LIGHTNER. We owned about 150,000,000 feet of spruce timber in this vicinity that the Siems-Carey contract covered, and the Government, Col. Disque, wrote us a letter and asked us to see Siems-Carey about this, regarding the purchase of the timber. We did, and when we got in there to see him we found that he wanted to pay us \$3 a thousand for selective logging rights in the tract, and as I understand it that price was made by Col. Disque personally. I do not know that he ever had any committee or anything of that kind to see whether that was a fair price or not. He told

us that was the maximum he would let Siems-Carey pay at that time, and we refused to accept that offer, and the result was that the case was put in the Federal court for condemnation.

Mr. LEA. Were condemnation proceedings started against your company?

Mr. LIGHTNER. Yes, sir. The papers were filed.

Mr. FREAR. But no action was taken before the war terminated?

Mr. LIGHTNER. No; the war ended it.

Mr. LEA. So there is a suit pending against your company in the name of the Government?

Mr. LIGHTNER. In the name of the Government. I will be very glad to give you the facts.

Mr. LEA. I did not know anything about it, but it was just the general idea we wanted to get. Do you remember when it was you sent Disque a wire?

Mr. LIGHTNER. I might add in connection with that, that we went to see Col. Disque, and Mr. Carey of the Siems-Cary Co. said he would try to see if he could get us a better price for that spruce, and he went to see Col. Disque and this is the way the suit came up. Col. Disque said that that was the highest price he could pay us and our answer was this: "You are on our lands cutting our timber and what is our position?" He said, "I will throw it in the Federal courts to-morrow." We said, "All right; that is all right with us," and after that, as the facts will bear out, the price was raised quite materially. It seemed to me to be rather an arbitrary stand to take on such a large proposition. We thought that had the Government gone in to log that selectively we would have suffered a complete loss of that tract of timber.

Mr. LEA. How large a tract did that involve?

Mr. LIGHTNER. Over 350,000,000.

Mr. LEA. About what percentage of it was spruce?

Mr. LIGHTNER. I think that would not be quite 30 per cent.

Mr. LEA. You have gone over the line of railroad above Crescent Lake?

Mr. LIGHTNER. Portions of it.

Mr. LEA. What portions of it?

Mr. LIGHTNER. Do you mean the Siems-Carey Road?

Mr. LEA. Yes.

Mr. LIGHTNER. I have gone 2 or 3 miles on the Beaver branch—
2 or 3 miles of it.

Mr. LEA. You saw the bridges that were washed out?

Mr. LIGHTNER. No; I did not.

Mr. LEA. I understood you to say there were a couple of bridges washed out.

Mr. LIGHTNER. I think you will see I said I heard that. I saw a slide.

Mr. LEA. But you did not see the bridges?

Mr. LIGHTNER. No, sir.

Mr. LEA. Do you know whether they were simply the false work or the completed bridge?

Mr. LIGHTNER. I do not.

Mr. LEA. I understand it was just the false work before the bridge was constructed, but you have no information about that?

Mr. LIGHTNING. No; none at all.

Mr. LEA. I may be mistaken about that myself. You spoke about a telegram being sent by Disque to the Goodyear people. Do you remember when that was—when the negotiations were dropped?

Mr. LIGHTNER. You mean the one when I was in California?

Mr. LEA. The one you spoke about a while ago when you said he sent a wire saying he regretted he had not seen you people and suggesting further negotiations take place.

Mr. LIGHTNER. It was either April or May of last year. He did not say further negotiations, however.

Mr. LEA. In substance, that was the idea?

Mr. LIGHTNER. Not to my mind it was not the idea.

Mr. LEA. He wanted to know somebody to deal with, and your name was mentioned?

Mr. LIGHTNER. He knew that before I went to California.

Mr. LEA. How long were you in California?

Mr. LIGHTNER. About a week, I guess, or 10 days; because, you see, we had just gone there on this proposition, and I called him on the long-distance and he said he was sorry he had missed us.

Mr. LEA. And you never went to see him any more, did you?

Mr. LIGHTNER. No, sir; he never asked me to.

Mr. LEA. Are you actively engaged in constructing these roads or superintending them, merely?

Mr. LIGHTNER. We have no mill here; just logging. I look after it all. It is all under my supervision. I go over it all as it is built.

Mr. LEA. Before you engaged in the construction of railroad here, did you have experience elsewhere?

Mr. LIGHTNER. Yes; in Michigan.

Mr. LEA. Those were timber roads, were they?

Mr. LIGHTNER. Yes, sir; and in Wisconsin.

Mr. LEA. You have more or less experience in that line for a good many years?

Mr. LIGHTNER. Between 12 and 14 years.

Mr. LEA. Probably, about what would be the total mileage of roads that you have had charge of?

Mr. LIGHTNER. That I do not know—a good many. You see, we take them up and put them down. The minute a grade is finished with us we are all ready to move to another place.

Mr. LEA. As soon as you cut out, you move?

Mr. LIGHTNER. It depends on how much timber there is.

Mr. LEA. I thought you might give some approximate idea.

Mr. LIGHTNER. In this operation here I said between 5 and 8 miles. Eight times 4 is 32 miles there, and more in the East, of course.

Mr. LEA. Did you have anything to do with preparing this statement as to the cost of building railroads in 1918?

Mr. LIGHTNER. I do not know whether our costs are in there, even. If you will read the heading there, you will see why that was compiled.

Mr. LEA. What I meant was, did you prepare this, or some one else?

Mr. LIGHTNER. Oh, no; I did not prepare it. I had nothing to do with it.

Mr. LEA. I suppose you concede that the cost of railroads, like everything else, depends on where they are built and how?

Mr. LIGHTNER. Well, we have built under practically every condition.

Mr. LEA. And it varies according to the conditions, of course?

Mr. LIGHTNER. Well, it varies a little, yes. It will vary.

Mr. LEA. With the character of the soil?

Mr. LIGHTNER. Yes.

Mr. LEA. And all that?

Mr. LIGHTNER. Yes.

Mr. LEA. Now, the general character of the soil through which this Crescent Railroad runs is rocky, isn't it, and stony?

Mr. LIGHTNER. Parts of it, I would say, was rocky, and parts of it was gravel soil.

Mr. LEA. That is the general type of the route?

Mr. LIGHTNER. Yes.

Mr. LEA. I think that is all.

Mr. MAGEE. Now, I want to see if I get the correct idea of getting spruce out of a tract. Take this tract up near Lake Pleasant, where this Lake Pleasant Railroad leads to. Now, as I understand you, the spruce trees do not grow to any extent solidly in any one place, they are mingled with a growth of other trees?

Mr. LIGHTNER. That is correct, sir. There are districts where you might find a section, for instance, where there would be quite a lot of spruce.

Mr. MAGEE. And in this particular tract was fir, hemlock, spruce, and cedar?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. All soft wood?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. Now, on an acre tract there might be, as I get it, perhaps two, three, four, or seven trees?

Mr. LIGHTNER. That is true of spruce.

Mr. MAGEE. Of spruce?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. And on some other acre there might not be any?

Mr. LIGHTNER. That is true.

Mr. MAGEE. And then in another spot you would find a cluster of them, where there would be more; is that right?

Mr. LIGHTNER. That is true.

Mr. MAGEE. Now, then, if there were only, say two, three, or five trees on an acre, would it be practicable to build a spur of railroad and market those trees at all?

Mr. LIGHTNER. It would be pretty expensive.

Mr. MAGEE. Well, it would be so expensive that it would be impracticable, wouldn't it?

Mr. LIGHTNER. Absolutely.

Mr. MAGEE. Now, suppose you built a spur of railroad into such a tract, what would be the distance on each side of that spur for practical logging purposes?

Mr. LIGHTNER. That we would pull the logs, you mean?

Mr. MAGEE. Yes. In other words, so that you could utilize the railroad?

Mr. LIGHTNER. In level country they try to keep it about 800 feet to 1,000 feet. In rough country they will sometimes pull farther. They will put one donkey out ahead of the other.

Mr. MAGEE. So that when you had built a spur of road into a tract and you had logged on each side for a distance of 800 feet, unless you wanted to extend the road then, as I understand, you would take up your rails and ties and build a spur somewhere else?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. And that is what you mean when you say in getting the timber off this tract there near Lake Pleasant that it would have been necessary to build 1,062 miles of spur railroad?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. Now, what would have been the character of the building of a spur railroad, would there be practically the same character as the logging road?

Mr. LIGHTNER. The only difference would be the speed. The weight is all there. Everything is there but the speed in transporting the train.

Mr. MAGEE. What would it be as a matter of cost, how would the cost compare?

Mr. LIGHTNER. Per mile?

Mr. MAGEE. Yes, per mile.

Mr. LIGHTNER. Well, that would be about from \$12,000 to \$15,000, depending on the character—

Mr. MAGEE. You would have to build a substantial logging road; that is, as a spur projection?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. To get it to the heavy timber?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. Now, as I understood you to testify, this tract of timber reached by this Siems-Carey-Kerbaugh railroad was so located that it was perfectly feasible to get into it from other directions?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. You think that getting into it from Clallam Bay would have been the most feasible and be less expensive?

Mr. LIGHTNER. And the quickest.

Mr. MAGEE. And the quickest, and I take it from your testimony that there were other directions from which railroads could have been constructed into this tract, for instance the Pysht River?

Mr. LIGHTNER. Yes, that could have been used. That would have been shorter, from Pysht to Lake Crescent would have been a shorter route.

Mr. MAGEE. Would it have been possible to have made an extension of the Northern Pacific up from Grays Harbor to get into this locality?

Mr. LIGHTNER. I think it would have been quite a little way.

Mr. MAGEE. A longer distance?

Mr. LIGHTNER. I do not think that would have been feasible.

Mr. MAGEE. Now, what do you say as to whether or not there were sufficient quantities of spruce to meet all required needs of the Government without getting into this particular tract at all?

Mr. LIGHTNER. Well, they got plenty of spruce up until the time the war ended, as far as I know.

Mr. MAGEE. Well, was the spruce all exhausted here at the time when the armistice was signed?

Mr. LIGHTNER. I do not think so.

Mr. MAGEE. There was still large quantities of spruce?

Mr. LIGHTNER. Still lots of spruce.

Mr. MAGEE. Here in the State of Washington?

Mr. LIGHTNER. Well, that district there is about the only place in the State, outside of Grays Harbor, here on the sound.

Mr. MAGEE. To what extent could you have got out spruce, or could spruce have been obtained in that locality, without going into this tract?

Mr. LIGHTNER. Well, the Merrill & Ring Co. made a mighty fine showing, and they are just cleaning the last of it up now, as I understand it. I imagine they have fifty or sixty million feet of logs there.

Mr. MAGEE. Well, you have spruce on your land?

Mr. LIGHTNER. We have spruce on our land.

Mr. MAGEE. Are there other lands in that locality or—

Mr. LIGHTNER. There is spruce in the Puget Sound Mills & Timber Co.

Mr. MAGEE. What necessity existed for the construction of this Lake Crescent-Lake Pleasant railroad, if you can give any?

Mr. LIGHTNER. I can not see why it should have been built that way at all.

Mr. MAGEE. Can you see any necessity for its construction at all?

Mr. LIGHTNER. Not that way. If they wanted spruce, there were shorter routes to get to the spruce.

Mr. MAGEE. And those were the routes which you have described?

Mr. LIGHTNER. Yes, sir.

Mr. MAGEE. And routes which could have been built, as you have stated here, at a cost of from \$300,000 to \$500,000?

Mr. LIGHTNER. No, sir.

Mr. MAGEE. Is that right?

Mr. LIGHTNER. That is the way I see it.

Mr. MAGEE. Now, take this railroad, this Lake Crescent-Lake Pleasant railroad; now, that runs along the north side of Lake Crescent—is it the north side?

Mr. LIGHTNER. Yes, I think you would call that the north side. I have a map here.

Mr. MAGEE. It is what you would call the north side?

Mr. LIGHTNER. Yes.

Mr. MAGEE. Now, I went over that railroad and I was impressed in going over it with the fact that the railroad was blazed out of the side of the mountain there—that is, the lake appeared to be some material distance below the road—that is, the road did not run along the lake shore at the base of the mountain. Is that right?

Mr. LIGHTNER. At places it is high—it is back from the lake a little.

Mr. MAGEE. How high up from the base of the mountain there—that is, from the water level—is this road built?

Mr. LIGHTNER. The grade, the railroad, you mean, how high was it from the water?

Mr. MAGEE. What I mean to say is, the road does not run along the crest of this branch of the Olympic Mountains?

Mr. LIGHTNER. No.

Mr. MAGEE. And it does not run along at the base of the mountain, along the lake shore?

Mr. LIGHTNER. In some places it is away from the lake shore.

Mr. MAGEE. It is all the way along, isn't it, along Crescent Lake—that is, it is up on the side of the mountain, it seemed to me.

Mr. LIGHTNER. Yes; it is right out of the face of the rock there.

Mr. MAGEE. Isn't it built along the side of the mountain?

Mr. LIGHTNER. Yes; it is built along the side of the mountain.

Mr. MAGEE. Up a good ways from the base of the mountain, where the water comes up on that side, a good many hundred feet, isn't it, in places?

Mr. LIGHTNER. In places it is; yes.

Mr. MAGEE. That is what I mean. In other words, they cut down a solid forest, made excavations, blasted out rocks, and stumps, and every obstacle in the way, and built a table land for this railroad right out of the side of the mountain, didn't they?

Mr. LIGHTNER. Yes; that is mountainous there.

Mr. MAGEE. I wanted to see whether I was right. That was the way it impressed me.

Now, take from Lake Crescent down to the junction, there—what junction is that—Whiskey Creek Junction, is it?

Mr. LIGHTNER. Yes.

Mr. MAGEE. Now called Disque Junction?

Mr. LIGHTNER. Yes.

Mr. MAGEE. Now, there is a long cut through solid rock, isn't there?

Mr. LIGHTNER. I have never been over that.

Mr. MAGEE. You have not been over that?

Mr. LIGHTNER. No, sir. I understand there is a canyon there, but I have never been near there.

Mr. MAGEE. You understand what?

Mr. LIGHTNER. I understand there is a sort of canyon there, called the Lyre Canyon.

Mr. MAGEE. That is what is called the Lyre Canyon?

Mr. LIGHTNER. Yes, sir. That is pretty deep. I have never been in there, so I can not tell you.

Mr. MAGEE. You do not know just how many feet of rock they cut through there?

Mr. LIGHTNER. No.

Mr. MAGEE. I think that is all.

Mr. FREAR. I will offer this document in evidence.

(Document received in evidence and marked Exhibit N, Lightner, August 22, 1919.)

(Thereupon, at 12.45 o'clock p. m., a recess was taken until 2 o'clock p. m.)

AFTER RECESS.

The committee met, pursuant to the taking of recess, at 2.15 o'clock p. m.

TESTIMONY OF MR. A. A. SCOTT.

The witness was sworn by Mr. Frear.

Mr. FREAR. State your full name, Mr. Scott.

Mr. SCOTT. A. A. Scott.

Mr. FREAR. Where do you live?

Mr. SCOTT. Mukilteo, Wash.

Mr. FREAR. Where is that place in reference to Seattle?

Mr. SCOTT. That is near Everett, just this side of Everett.

Mr. FREAR. What is your business?

Mr. SCOTT. I am in the lumber manufacturing business.

Mr. FREAR. And have been for how many years?

Mr. SCOTT. Thirteen years on the coast.

Mr. FREAR. And where prior to that time?

Mr. SCOTT. State of Michigan.

Mr. FREAR. What has been the character of your duties in connection with the lumber business?

Mr. SCOTT. On the coast operating sawmills and logging camps.

Mr. FREAR. What is the company you are connected with?

Mr. SCOTT. The Puget Sound Mills & Timber Co., of Port Angeles, and the Crown Lumber Co., of Mukilteo, Wash.

Mr. FREAR. This mill at Port Angeles is the large mill that is doing business there at the present time?

Mr. SCOTT. Yes, sir.

Mr. FREAR. You are acquainted, are you, with the other mill that is there at Port Angeles, that was contemplated to be built by the Seims-Carey, Kerbaugh Co.?

Mr. SCOTT. I have seen the structure as it is. I have been through it once. I have never seen the plans or the mill.

Mr. FREAR. Do you know anything about how it was to be equipped or anything of that kind?

Mr. SCOTT. I understood it was to be equipped to be what they call a double-band mill, approximately 250,000 in one shift.

Mr. FREAR. That is, an 8-hour shift?

Mr. SCOTT. An 8-hour shift, as I understood. They intended to run three 8-hour shifts.

Mr. FREAR. That is, day and night?

Mr. SCOTT. That is day and night.

Mr. FREAR. Was there anything about the mill or the equipment, so far as you understand, that was different from any other up-to-date mill?

Mr. SCOTT. No; I understand it was the same equipment. They intended to install a cutting-up plant right in connection with the mill.

Mr. FREAR. Your mill is at the same place, Port Angeles?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What kind of a mill have you people?

Mr. SCOTT. We have a double-band mill.

Mr. FREAR. What is the capacity?

Mr. SCOTT. Approximately 280,000 in eight hours.

Mr. FREAR. In what respect does it differ from this Port Angeles mill of the Seims-Carey, Kerbaugh Co.?

Mr. SCOTT. The only difference is that it is a steam-driven mill, and I understand that the Seims-Carey, Kerbaugh Co. mill was to be an electrically-driven mill.

Mr. FREAR. Where would they get the power?

Mr. SCOTT. They were to make their own power through a turbine engine.

Mr. FREAR. Not water power ?

Mr. SCOTT. No, sir.

Mr. FREAR. How long has your mill been built at that point?

Mr. SCOTT. Five years; 1914.

Mr. FREAR. It is a comparatively new mill?

Mr. SCOTT. Practically a new mill.

Mr. FREAR. So, if the Secretary of War, in his letter, wrote that they tried to buy an old mill up at Port Angeles it must have been your mill that he had in mind?

Mr. SCOTT. That is the only mill there.

Mr. FREAR. And your mill had only been built four years?

Mr. SCOTT. Five years.

Mr. FREAR. Four years at that time?

Mr. SCOTT. Four years in 1918.

Mr. FREAR. Your mill has a larger capacity, as I understand, than this other mill?

Mr. SCOTT. It is a larger mill; yes, sir.

Mr. FREAR. Did you people do any work, sawing or otherwise, for the Government?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What work was done?

Mr. SCOTT. At first we cut what they call the regular spruce specifications, and later we cut spruce cants and fir cants, shipping them to Vancouver, Wash.

Mr. FREAR. By the way, before I forget it, you people had another mill, had you?

Mr. SCOTT. Yes; we have another mill at Mukilteo.

Mr. FREAR. What is the capacity of that mill?

Mr. SCOTT. Two hundred and forty thousand in eight hours.

Mr. FREAR. That is practically the same size; your two mills are practically twice the capacity of this mill that was to be built at Port Angeles?

Mr. SCOTT. Yes, sir.

Mr. FREAR. How long has that other mill been built?

Mr. SCOTT. That mill is 14 years old.

Mr. FREAR. What is the character of its equipment, as to being modern or otherwise?

Mr. SCOTT. It is a modern mill. We have what we call two-head band rigs, and one resaw, and one gang.

Mr. FREAR. So that your two mills had a capacity of an eight-hour shift of 500,000 feet per day?

Mr. SCOTT. Approximately 520,000.

Mr. FREAR. A million and a half in three shifts?

Mr. SCOTT. Yes, sir.

Mr. FREAR. I will now ask you again about the contract which you had with the Government?

Mr. SCOTT. Well, we simply had a contract with the Government to furnish, as I said, the specifications for the finished airplane stock, rough finished, which was later changed to the cants. We furnished spruce cants and fir cants.

Mr. FREAR. Who were they furnished to and where were they sent?

Mr. SCOTT. They were sent to Vancouver, Wash., the Spruce Production Corporation.

Mr. FREAR. What was done with them there?

Mr. SCOTT. Well, they were finished there into different parts, I suppose, of airplanes.

Mr. FREAR. Special machinery was furnished for that purpose?

Mr. SCOTT. At our plant?

Mr. FREAR. No; at their plant.

Mr. SCOTT. Yes.

Mr. FREAR. Could any mill have been equipped with it if the Government had chosen to supply it?

Mr. SCOTT. It could have been, yes; but it would have been pretty expensive.

Mr. FREAR. But if the Government chose to supply it?

Mr. SCOTT. The Government could have installed it.

Mr. FREAR. At any plant?

Mr. SCOTT. The Government could have installed it at any plant; yes. They contemplated building one at our plant.

Mr. FREAR. As part of the Government plant, supplementing the work of that plant?

Mr. SCOTT. Yes, sir.

Mr. FREAR. But there was none built because under this contract that was let with Seims-Carey-Kerbaugh Co.—

Mr. SCOTT. There wasn't any cut-up plant built for the Seims-Carey-Kerbaugh Co. that I know of. There was one contemplated being built at Port Angeles, but the only one that was built that I knew of was at Vancouver.

Mr. FREAR. The machinery was never installed at Port Angeles?

Mr. SCOTT. No, sir.

Mr. FREAR. Did you ever have any dealings with the Seims-Carey-Kerbaugh Co.?

Mr. SCOTT. Yes, sir.

Mr. FREAR. Of what character?

Mr. SCOTT. We furnished them lumber to construct the mill at Port Angeles. We also furnished them lumber to build their railroad from Disque to Lake Pleasant. We furnished them bridge timbers and other timbers. We also furnished them lumber for building all of their bunk houses, of which there were approximately 240 bunk house cars built at Port Angeles. I do not know whether there was that many built, but that was the contract.

Mr. FREAR. That was all furnished from your mill?

Mr. SCOTT. Yes, sir; practically all of it.

Mr. FREAR. What negotiations did you have, if any, with them in regard to your own mill? Not as to the amount, or anything of that kind.

Mr. SCOTT. You mean as to the sale of the mill to the Seims-Carey-Kerbaugh Co.?

Mr. FREAR. Yes.

Mr. SCOTT. We were asked if we would sell our mill, and we told them that we would, and I think the offer was turned down.

Mr. FREAR. Where is your timber located? Have you any timber in that section?

Mr. SCOTT. Yes, sir; we have timber in Clallam County.

Mr. FREAR. Where is it?

Mr. SCOTT. We have timber at what we call the Twin Tract.

Mr. FREAR. That is how far from your mill—that is, approximately?

Mr. SCOTT. It is approximately 30 miles from Twin Rivers to Deep Creek. We have approximately 300,000,000 feet there—did have in 1918. We have another tract at Lake Crescent, following the Lyre River Canyon.

Mr. FREAR. The Milwaukee Land Co. timber, is that the same timber?

Mr. SCOTT. That is known as the Twin tract. The Milwaukee Land Co. tract is known as the Twin tract.

Mr. FREAR. You had that for your mill, so of course that would be an element in determining the sale of your mill?

Mr. SCOTT. Yes, sir.

Mr. FREAR. Because it left you in a position where you would have to handle that in some way, providing you disposed of your mill?

Mr. SCOTT. We would have to handle that timber separately if we disposed of our mill, because the Seims-Carey-Kerbaugh Co. did not want thaotimber. We would have to dispose of that up—sound some place. We probably would have towed it to the Mukilteo mill.

Mr. FREAR. How far is that?

Mr. SCOTT. That is about 80 miles, 85 miles.

Mr. FREAR. You had something to do with a right of way up the Lyre River?

Mr. SCOTT. Yes, sir; we owned practically $3\frac{1}{2}$ or 4 miles of the right of way that this railroad is on from Disque to Lake Crescent, up the Lyre River Canyon.

Mr. FREAR. Did you have rails there, track?

Mr. SCOTT. No, sir. We had a roadbed graded part of the way. That is the only available route to take that timber out.

Mr. FREAR. What has been done with your road?

Mr. SCOTT. Part of it was destroyed by the Spruce Production Division in building their road. I haven't figured out just how much, but approximately 1,800 or 2,000 feet was destroyed entirely by the Spruce Production road.

Mr. FREAR. That is up that Lyre Canyon?

Mr. SCOTT. Yes, sir.

Mr. FREAR. Did you convey any rights to them, or was anything done, any condemnation proceedings, or what?

Mr. SCOTT. We haven't conveyed any rights at all.

Mr. FREAR. Was this your land?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What is the situation?

Mr. SCOTT. Well, we have refused to convey a right of way to the railway company.

Mr. FREAR. Why?

Mr. SCOTT. Until some provision is made to take our timber out. Approximately 200,000,000 feet has got to come out that way, and we absolutely refused to convey the land to the railroad company until provision was made to take our timber out. If that railroad was sold to private individuals and was not a common carrier, we would be at the mercy of those private individuals.

Mr. FREAR. That is what was done, wasn't it?

Mr. SCOTT. Yes, sir.

Mr. FREAR. It was built for Seims-Carey, Kerbaugh, a private company?

Mr. SCOTT. Yes, sir.

Mr. FREAR. That was a private company that was going to bring out the logs?

Mr. SCOTT. Yes, sir.

Mr. FREAR. On their own contract?

Mr. SCOTT. Yes, sir.

Mr. MAGEE. He is referring now to if it should be sold to some private individuals.

Mr. SCOTT. Yes; I am referring to that.

Mr. FREAR. I am speaking about the condition that confronted you. That was it?

Mr. SCOTT. Yes.

Mr. FREAR. That was a private company?

Mr. SCOTT. Yes.

Mr. FREAR. And they would be given an exclusive contract for this railroad?

Mr. SCOTT. Yes; I believe the deed read in the name of the Seims-Carey, Kerbaugh Co.

Mr. FREAR. But the Government agreed to get that right of way for them under their contract?

Mr. SCOTT. I do not know as to that. I know that the application was made by the Seims-Carey, Kerbaugh Co. to us for the right of way.

Mr. FREAR. And they were building the railroad on a cost-plus contract, as it appears here?

Mr. SCOTT. I understand so.

Mr. FREAR. Financed by the Government?

Mr. SCOTT. I understand so.

Mr. FREAR. Are you familiar with the building of railroads or matters of that kind?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What is your experience in building logging roads?

Mr. SCOTT. We construct from 5 to 8 miles a year.

Mr. FREAR. During the past six months?

Mr. SCOTT. During the past six months we have graded 8 miles.

Mr. FREAR. Where was that?

Mr. SCOTT. Between Deep Creek and Twin River. That is a mountainous country. Of course, it is not a transcontinental road that we are building.

Mr. FREAR. You are building simply for logging purposes?

Mr. SCOTT. Simply for logging purposes, that is all.

Mr. FREAR. Have you any estimate as to what it is costing you?

Mr. SCOTT. Yes, sir.

Mr. FREAR. Tell the committee, please?

Mr. SCOTT. Well, from fourteen to sixteen thousand dollars a mile. steeled out.

Mr. FREAR. What kind of steel?

Mr. SCOTT. We are using from 45 to 60 pound.

Mr. FREAR. What kind of locomotives can be used on that?

Mr. SCOTT. The Shay locomotive up to 70 tons. We have five. We haul the Milwaukee cars right up on our land, right into the

woods on our branch lines, and load them and deliver them back to the Milwaukee line at Twine River.

Mr. FREAR. How many cars to one engine?

Mr. SCOTT. We can take up 10 to 12 empties and bring down on a 7 per cent grade from 5 to 6 cars.

Mr. FREAR. You build then even up to 7 per cent grade?

Mr. SCOTT. Yes; we have some 7 per cent grade.

Mr. FREAR. That is right in the rough country, up the sides of the hills?

Mr. SCOTT. Up the side of the mountain; yes, sir.

Mr. FREAR. Did you have any dealings with Mr. Disque, or any of the other people there in Portland?

Mr. SCOTT. We have had dealings with the Spruce Production Division; yes, sir; in regard to our contract for furnishing the spruce cants and fir cants. I would not say that we had any direct dealings with Col. Disque.

Mr. FREAR. Did you ever meet him?

Mr. SCOTT. Yes, sir; I called on him several times in Portland.

Mr. FREAR. Did you ever discuss anything regarding any contracts?

Mr. SCOTT. No, sir.

Mr. FREAR. Is there anything else that you think of that I have omitted that might be of interest or service to the committee?

Mr. SCOTT. There is only one other thing that I have in mind, and that is in regard to the mill that was purchased by the Seims-Carey, Kerbaugh Co. in Canada and shipped to Port Angeles.

Mr. FREAR. That was the machinery in the mill?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What about that?

Mr. SCOTT. Well, that was purchased up there in British Columbia and shipped to Port Angeles, which I think was entirely unnecessary. There were 30 mills on Puget Sound, idle for 16 hours, with a capacity of 6,000,000 feet in 8 hours' run, or 12,000,000 feet in 16 hours' run, able to cut all the spruce that could be produced.

Mr. FREAR. And 18,000,000 feet on a 24-hour run?

Mr. SCOTT. If necessary; yes, sir.

Mr. FREAR. Those mills were right on the sound?

Mr. SCOTT. Right on Puget Sound, on tidewater, that logs could be delivered to.

Mr. FREAR. What was done with the mill that was brought down from Canada?

Mr. SCOTT. Why, part of it was shipped to Port Angeles, and after the armistice was signed it was reloaded—what portion was unloaded was reloaded on cars and shipped to Vancouver, Wash.

Mr. FREAR. That was the machinery?

Mr. SCOTT. The machinery and frame of the mill. I understand that the boilers, burner, and smoke stack was still intact, and the dry kiln.

Mr. FREAR. This mill that is there, the frame work appears to be up?

Mr. SCOTT. That has nothing to do with the Canadian mill at all. It was an entirely different sawmill that was purchased from a Canadian corporation in New Westminster, British Colombia.

Mr. FREAR. For use at what place?

Mr. SCOTT. Lake Pleasant.

Mr. FREAR. That was the Lake Pleasant mill that they proposed to put in?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What was the necessity for the mill there, as you understood?

Mr. SCOTT. Well, to cut spruce cants, that is all I know. That is what they told me. They couldn't get the capacity in the Port Angeles mill and it was necessary to build another mill at Lake Pleasant to cut these cants.

Mr. FREAR. What was to be the capacity of the Lake Pleasant mill?

Mr. SCOTT. Approximately 250,000 feet in 8 hours.

Mr. FREAR. That is, their two mills would cut the same capacity as the two mills your company had?

Mr. SCOTT. Yes, sir; or our mill at Port Angeles would have cut all their spruce cants in 24 hours, that those 2 mills would cut at one eight hours.

Mr. FREAR. They were anticipating running day and night, were they not?

Mr. SCOTT. I understood they were expecting to run 24 hours.

Mr. FREAR. Your mills could cut the same quantity as their mills.

Mr. SCOTT. Yes.

Mr. FREAR. How many other mills are there on the sound?

Mr. SCOTT. Approximately 30 to 35 mills on tidewater that spruce logs could be towed to that were idle 16 hours.

Mr. FREAR. Do you know whether there was any proposition made to these mills for cutting by the Spruce Production Corporation at Portland?

Mr. SCOTT. I do not know if the Spruce Production Corporation made any overtures to the mills, but I knew Seims-Carey-Kerbaugh did. They conferred with the mills, or with a committee of all the mills on Puget Sound.

Mr. FREAR. Were there any negotiations of any kind directly attempted prior to the coming of Seims-Carey-Kerbaugh in the country?

Mr. SCOTT. Not that I know of. We had no negotiations with the Spruce Production Division. There were simply contracts sent to us to furnish all the cants that we could, which we did.

Mr. FREAR. You furnished those?

Mr. SCOTT. Yes, sir; we furnished all we possibly could cut.

Mr. FREAR. What portion of the time of your mill was taken in furnishing those cants?

Mr. SCOTT. We only operated one shift, and we cut all the clear off of the fir logs and all the clear off of the spruce logs, into cants, in preference to our commercial orders. Of course, the balance of the log the Spruce Production Division didn't want and we worked that up into our commercial business.

Mr. FREAR. Did it take all the time of the eight-hour shift to supply the needs of the Spruce Production?

Mr. SCOTT. Well, of course you don't cut full—you don't cut full aircraft lumber on an entire shift, you simply get what is in the log

that will apply on that order, and then you have got to go to work and continue cutting up the log into commercial orders.

Mr. FREAR. What proportion of the capacity of the mill was taken for the Government end of it and what proportion for the commercial?

Mr. SCOTT. Well, that depends entirely on the class of logs you are working on. If you were putting in a certain amount of clear, or No. 2 logs, and produced—and it would produce aircraft lumber, why, we figured that we got about 28 to 30 per cent of cants out of a clear log, so that would be about 30 per cent, you might say, going to the Government, out of a clear log, and about 70 per cent went into commercial business.

Mr. FREAR. Would that be the same amount of time that would occur in other mills?

Mr. SCOTT. Yes; if the logs were selected and delivered to those mills.

Mr. FREAR. In the Los Angeles mill.

Mr. SCOTT. In the Port Angeles mill they intended only to cut spruce logs. We cut fir and spruce.

Mr. FREAR. And they would have to take up the commercial end of it?

Mr. SCOTT. Yes, sir.

Mr. FREAR. So that the proportion—

Mr. LEA. You said Los Angeles. You meant Port Angeles.

Mr. FREAR. I meant Port Angeles.

Mr. SCOTT. They would have to take up the time to cut their common lumber into commercial sizes.

Mr. FREAR. In the same way you were doing it? In other words, the capacity of the mills would have been the same, as I understand you?

Mr. SCOTT. Yes.

Mr. FREAR. Then, what was the necessity for the building of this Port Angeles mill and the Lake Pleasant mill?

Mr. SCOTT. In my opinion, there was absolutely no necessity for building the mills—either one.

Mr. FREAR. What was the necessity as represented, so far as you understood?

Mr. SCOTT. They simply wanted to build sawmills, I guess. That is all I know. We certainly had enough sawmills built on Puget Sound to cut all the spruce lumber that could be produced in logs or that the Government wanted. All the Government had to do was to commandeer the mill. If a man didn't want to sell his mill to the Government, all they had to do was commandeer; they had the power to do it.

Mr. FREAR. Was this the situation: The Siems-Carey-Kerbaugh Co. had the railroad; it is necessary to have a railroad, isn't it, in order to get your logs?

Mr. SCOTT. Yes; you have in that special case.

Mr. FREAR. And they had the power of the Government behind them?

Mr. SCOTT. Yes, sir.

Mr. FREAR. And they were bringing the logs in there, sawing part of them for public use—Government use—under the contract, and sawing the rest of them for commercial use; that is right, is it?

Mr. SCOTT. Yes, sir.

Mr. FREAR. They were given the preference there. Were they experienced loggers, or what do you know about them?

Mr. SCOTT. I never heard of them until they came to this country, only as railroad builders.

Mr. FREAR. Did they claim to have had any knowledge at all?

Mr. SCOTT. I never talked to them in regard to that. I could not say.

Mr. FREAR. They never sawed any?

Mr. SCOTT. Not that I know. The mill was never operated, so they had no experience in that line.

Mr. FREAR. The Pleasant Lake mill was never constructed?

Mr. SCOTT. No, sir.

Mr. FREAR. Just laid the foundations?

Mr. SCOTT. I think part of the foundation was driven there, the same as the Port Angeles mill; part of it was constructed; the machinery was all there on cars, or a portion of it, at the time the armistice was signed. That was afterwards shipped to Vancouver.

Mr. FREAR. Is there anything else you think of—

Mr. SCOTT. No; I don't think of anything else.

Mr. FREAR. The railway that you have been discussing has been that that you built right there, near Twin?

Mr. SCOTT. Yes.

Mr. FREAR. How does that compare—is that sufficient to carry the ordinary locomotives?

Mr. SCOTT. Well, the Milwaukee tracks, or the Milwaukee engines, sometimes run on our tracks without any trouble. Of course, they are not supposed to go up in the woods. Our own locomotives haul our and the Milwaukee empties up, and our engines haul the loads down.

Mr. FREAR. Have you any Shay engines?

Mr. SCOTT. We have Shay engines—70-ton engines—that is, three of them are 70-ton engines. We probably built up there 18 or 20 miles of railroad in the Twin district; mountainous country.

Mr. FREAR. And at the average cost that you have said?

Mr. SCOTT. From fourteen to sixteen thousand dollars per mile.

Mr. FREAR. Was that true last year, 1918?

Mr. SCOTT. Yes, sir. I think it cost more this year than it did last year, on account of labor.

Mr. FREAR. How many employees do you generally carry in your business?

Mr. SCOTT. We have 350 in the woods operation, and about 500 in the sawmill, shingle mill, box factory, and planing mill, operating two shifts.

Mr. FREAR. Did you have any occasion to use soldiers?

Mr. SCOTT. Yes, sir; we had soldiers in 1917 and 1918.

Mr. FREAR. Got them from the Spruce Production Co.?

Mr. SCOTT. Yes.

Mr. FREAR. What was the method of contracting there—just briefly state; and how many did you have?

Mr. SCOTT. We had 150 soldiers in the woods.

Mr. FREAR. Logging?

Mr. SCOTT. In the logging end; yes, sir. We applied to the Spruce Production Division for the soldiers, and they were sent

to us on December 29, 1917. I think we were the first company that had soldiers or employed soldiers in this district.

Mr. FREAR. Were they paid, as has been suggested, the same rates as civilian labor?

Mr. SCOTT. Paid the same as civilians.

Mr. FREAR. Was their work confined to Government operations—that is, Government logs—spruce logs?

Mr. SCOTT. No, sir; not altogether. Commercially and Government. We were getting out spruce and fir, part of which was going into the shipbuilding material, part into aircraft material.

Mr. FREAR. And was part used in commercial business, outside of that?

Mr. SCOTT. I should say at least 50 per cent was.

Mr. FREAR. In other words, the soldiers were let out by this Spruce Corporation, down in Portland, to carry on private business affairs, or doing commercial sawing, in your mill and others, I assume?

Mr. SCOTT. Yes, sir; they were in our mill afterwards.

Mr. FREAR. And paid by you at the going rates—

Mr. SCOTT. Yes.

Mr. FREAR (continuing). Fixed by the Spruce Production Corporation?

Mr. SCOTT. The scale was fixed—well, fixed by the loggers—well, really, by the Spruce Production Division. I think the scale was fixed later by—

Mr. FREAR. What justification was made for putting these soldiers out for ordinary commercial business?

Mr. SCOTT. Well, of course, in the logging industry, part of the log is going for the Government and part is for commercially, so, when they are assisting us in logging we have got to work a log, no matter what it makes.

Mr. FREAR. Were you cutting only spruce and fir?

Mr. SCOTT. Cutting spruce, hemlock, and cedar.

Mr. FREAR. When it comes to the hemlock and cedar, what was done by the soldiers, were they helping on that?

Mr. SCOTT. Yes, sir.

Mr. FREAR. What was the justification for furnishing soldiers for cutting hemlock and cedar for private business affairs? And I am not criticizing your position or that of those who were using them, but I am trying to get what the situation was that confronted the people here that they were turning soldiers in for that kind of an operation.

Mr. SCOTT. Well, we were short of labor. The Government needed the spruce and needed the fir.

Mr. FREAR. Sure. I am getting at the cedar and hemlock.

Mr. SCOTT. Well, you have to log the cedar and the hemlock; you couldn't leave that in the place; you could not go back and cut it again. We had to log it at the time. We tried to keep away from cutting it in the sawmill at the time; but we had to log it.

Mr. FREAR. I understand you had to log it. I was wondering if you had to saw it at that time. Of course, in logging it required the help of the soldiers.

Mr. SCOTT. If you dump the logs in the water you can only keep them in salt water a certain length of time—they will be eaten up by teredos. Four to six months is the longest you can keep the logs in salt water.

Mr. FREAR. If you had indulged in selective logging, as was proposed here at different times, of course you would not have had to have taken the other?

Mr. SCOTT. No; but we never entertained that at all.

Mr. FREAR. I was going to ask if it was not practicable.

Mr. SCOTT. No; that was not practicable. We would not have entertained it.

Mr. FREAR. What would you say about this contract of 250,000,000 fitches that was let to the Siems-Carey-Kerbaugh Co., and the power of carrying it out?

Mr. SCOTT. I don't think it would be possible to carry it out.

Mr. FREAR. Why?

Mr. SCOTT. Not in selective logging, I don't think.

Mr. FREAR. Would it be possible in any other system?

Mr. SCOTT. No; I don't think it could have been possible.

Mr. FREAR. It was figured out this morning that it would take about a billion feet of logs, as I understood in there, to get 250,000,000 feet of fitches.

Mr. SCOTT. That is, you would have to log that much timber of all kinds.

Mr. FREAR. Of all kinds, to get out, unless you adopted the selective system, and of course that was impracticable, to get it out, because it would have taken several years to get it out on that one line of road, wouldn't it?

Mr. SCOTT. Yes.

Mr. FREAR. What have you to say about the selective system—would it have required the same railways that it would for the general logging?

Mr. SCOTT. Well, I think it would. I don't know anything about selective logging; I never have done any; but I don't think it is practical. I don't believe any logger thinks it is practical.

Mr. FREAR. Had anybody ever done that on the coast, so far as you know?

Mr. SCOTT. Not that I know of.

Mr. FREAR. You are rather familiar with the business?

Mr. SCOTT. Yes, sir; about 13 years out here. I understand that the Spruce Production Division intended to mark every tree that they were going to cut.

Mr. FREAR. What would have been the practical effect of doing that, in the process of logging?

Mr. SCOTT. Well, I think they would have had a hard time of pulling those trees out and leaving a lot of trees standing. I don't think they could have done anything to speak of in the way of logging. You have got to log every tree to make it practical.

Mr. FREAR. That is, what is the stand of timber up there; dense, or otherwise?

Mr. SCOTT. Well, it varies—

Mr. FREAR. I mean at that Pleasant—

Mr. SCOTT. I never have been through the Lake Pleasant timber, except a portion of the road from Lake Crescent to Lake Pleasant. I have been through what they call the Beaver Bench. I understand that runs pretty heavy to fir; practically no spruce logs between Disque and Lake Crescent.

Mr. FREAR. You have been over this new road, or have you any information in regard to it?

Mr. SCOTT. I have walked over the road from Disque to Lake Crescent. I have never been over the balance of it.

Mr. FREAR. That being in the part that belonged to you prior to its absorption or its—

Mr. SCOTT. Yes, sir.

Mr. FREAR (continuing). Appropriation by this Siems-Carey-Kerbaugh—

Mr. SCOTT. Yes, sir. That is known as the Lyre Canyon Road, from Disque to Lake Crescent.

Mr. LEA. There wasn't any practical way of dividing the labor in a mill, for instance, like yours, so that the soldiers could work on the Government work alone, was there?

Mr. SCOTT. No; it was absolutely impossible.

Mr. LEA. There was not any way of dividing their compensation either, was there—

Mr. SCOTT. No, sir.

Mr. LEA (continuing). Under those conditions. Do you believe it was practical to have soldiers work in your mill at soldier pay?

Mr. SCOTT. I don't think, in a private concern, that you could do it; for instance, you could not in the woods; you could not have a civilian pulling one end of a saw and a soldier pulling the other end of a saw, one at a dollar a day and the other at five. How long would they work together?

Mr. LEA. What price did you offer to accept for the mill at Port Angeles?

Mr. SCOTT. I would not care to state. You see, we had a sawmill and shingle mill and a box factory—or, I mean, a shingle mill, a box factory, and general store, all operations that the Siems-Carey-Kerbaugh Co. were really not interested in. They were only interested in the sawmill. We could not very well sell the sawmill alone.

Mr. FREAR. So you were not in the market to sell on those conditions?

Mr. SCOTT. Oh, we could have turned it over to them, if they had wanted it; we would have sold out.

Mr. LEA. But you could not agree on the price?

Mr. SCOTT. The price could not be agreed upon.

Mr. LEA. Well, I won't insist on the amount. Did you have any trouble with the Siems-Carey-Kerbaugh Co. in reference to the lumber you furnished them?

Mr. SCOTT. No, sir.

Mr. LEA. Now, the right-of-way matter, as I understand that was taken in the name of Siems-Carey-Kerbaugh Co., under a contract with the Government by which in case the contract was surrendered, that all the rights they acquired go to the Government; isn't that the way you understood it?

Mr. SCOTT. I never read the contract; I never have seen the contract. I understood the deed was to run to the Siems-Carey-Kerbaugh Co., though.

Mr. LEA. Have you at this time a claim for taking your track up in the canyon?

Mr. SCOTT. No, sir; not the track. Destroying the roadbed; yes, sir.

Mr. LEA. And that has not been adjusted?

Mr. SCOTT. No, sir.

Mr. LEA. The road that you constructed, is that now in use—the railroad you constructed last year?

Mr. SCOTT. You mean up the Lyre Canyon or the road—we didn't construct any road up the last year—up the Lyre Canyon. All our roads that were constructed were between Twin and Deep Creeks. They are still in use.

Mr. LEA. Where is the last road you constructed?

Mr. SCOTT. Running west from Twin River, a branch line off of the Milwaukee road to Deep Creek.

Mr. LEA. This is in use now, is it?

Mr. SCOTT. Yes, sir.

Mr. LEA. Did you have a portion of your timber destroyed up there last year?

Mr. SCOTT. By what?

Mr. LEA. By fire?

Mr. SCOTT. Not last year; no, sir. There was no fire last year. We had a fire in 1916.

Mr. MAGEE. I would like to ask a question, Mr. Chairman. With reference to the title to the lands occupied by this Lake Crescent-Lake Pleasant Railroad, do I understand your company still holds the title upon which this railroad has been built through this Lyre Canyon district, as you have described?

Mr. SCOTT. Yes, sir; it does for three and a half to four miles; I don't know exactly the distance.

Mr. MAGEE. And what is the width of the roadway there occupied by the—

Mr. SCOTT. It is 100 feet, principally 100 feet; and 200 feet where some switches were put in, or 150 feet; principally 100 feet.

Mr. MAGEE. For a distance of 3 or 4 miles?

Mr. SCOTT. Yes, sir.

Mr. MAGEE. Have you never given any deed of it?

Mr. SCOTT. No, sir.

Mr. MAGEE. Or any right of way?

Mr. SCOTT. No, sir:

Mr. MAGEE. Title is absolutely in yourself—

Mr. SCOTT. Yes, sir.

Mr. MAGEE. In your company?

Mr. SCOTT. Yes, sir.

Mr. MAGEE. Is that in addition to the claim you have for damages by reason of the destruction of the grades you have described?

Mr. SCOTT. You mean the amount involved in addition?

Mr. MAGEE. No; I mean is your claim for damages for roadbed destroyed independent of the lands there, or is it the same proposition?

Mr. SCOTT. That is independent. The payment for the right of way, or the price decided upon the right of way and the damages for destroying the roadbed and the timber that was removed, that has all been agreed upon.

Mr. MAGEE. You mean the amount of damages?

Mr. SCOTT. Except the right of way has not been agreed upon, but I mean for the timber and the land, that has been agreed upon.

Mr. MAGEE. As between the Spruce Production Corporation and your company?

Mr. SCOTT. No, sir; between Siems-Carey-Kerbaugh Co. and our company. Recently, the Spruce Production Division have talked to us in regard to the same, but our dealings have been with the Siems-Carey-Kerbaugh Corporation, or, rather, with their attorney.

Mr. MAGEE. But no adjustment has been reached in reference to the title to the lands upon which the railroad was constructed and the lands used by the railroad?

Mr. SCOTT. No, sir.

Mr. MAGEE. Have any court proceedings been instituted for condemnation—

Mr. SCOTT. No, sir.

Mr. MAGEE (continuing). Or anything of that sort?

Mr. SCOTT. Not that we know of.

Mr. MAGEE. So that as conditions exist at present you have no means of getting your timber to market—the tract which you own there?

Mr. SCOTT. We are not ready to take it out yet. We won't be for possibly two years. We want to divide—to see that we are protected, to know that we are going to get it out.

Mr. MAGEE. But you could not get it out unless you can get the right to use this railroad or else construct another one of your own.

Mr. SCOTT. We could not build another one of our own, because that is practically the only available route up through that canyon to take this timber out.

Mr. MAGEE. Do you remember the cut through solid rock there in this canyon?

Mr. SCOTT. Yes, sir. I have walked over it several times.

Mr. MAGEE. How many feet of solid rock cut would you say has been made there in the construction of this road—that is, I mean in height?

Mr. SCOTT. I have never estimated it; I could not say.

Mr. MAGEE. You don't know whether it is 150 feet or 200 feet?

Mr. SCOTT. No; I don't recall. I have only walked over that twice, and I never really tried to measure the distance.

Mr. MAGEE. You remember where they cut extensively through solid rock formation?

Mr. SCOTT. Yes; I do.

Mr. MAGEE. And do you know how long a distance the cut through solid rock is?

Mr. SCOTT. Why, I could not state as to feet or miles.

Mr. MAGEE. Approximately?

Mr. SCOTT. No; I could not state.

Mr. MAGEE. A pretty deep cut, isn't it, through that solid rock?

Mr. SCOTT. Yes; it is a big cut; it is a heavy cut.

Mr. MAGEE. I think it is material here to show, by some one who knows about it, in reference to the title to the lands occupied by this railroad. I would like to know where the title is.

Mr. JAMES M. KANE. I can show that, Mr. Magee.

Mr. MAGEE. You know about that?

Mr. JAMES M. KANE. Yes; I will show you all about it.

TESTIMONY OF MR. E. B. CHINN.

(The witness was sworn by Mr. Frear.)

Mr. FREAR. Where do you live, Mr. Chinn?

Mr. CHINN. Seattle.

Mr. FREAR. You have lived here how many years?

Mr. CHINN. Nineteen.

Mr. FREAR. Engaged in what business?

Mr. CHINN. Logging.

Mr. FREAR. What position do you hold, if any, in regard to the loggers?

Mr. CHINN. I am interested in a logging operation.

Mr. FREAR. Is there any organization here of loggers?

Mr. CHINN. Yes, sir.

Mr. FREAR. What is the name?

Mr. CHINN. There is a local organization, called the Loggers' Information Association of Puget Sound.

Mr. FREAR. Who composes that body of men?

Mr. CHINN. About 25 or 30 of the principal logging concerns on Puget Sound.

Mr. FREAR. And that is the concern that you are connected with?

Mr. CHINN. Aside from my own operation.

Mr. FREAR. Where are your own operations conducted?

Mr. CHINN. In Whatcom County, in the northern part of this State.

Mr. FREAR. How long have you been logging up there?

Mr. CHINN. Since 1901, with some intermissions.

Mr. FREAR. Been engaged this year in logging?

Mr. CHINN. Yes, sir.

Mr. FREAR. Last year?

Mr. CHINN. Yes, sir.

Mr. FREAR. Build railways, do you?

Mr. CHINN. Yes, sir.

Mr. FREAR. Logging railways?

Mr. CHINN. Yes, sir.

Mr. FREAR. What kind of a country is it where you are logging, as to being level or rolling, or what is the general type?

Mr. CHINN. It is what would be termed rough ground in this country—mountainous, mountain side.

Mr. FREAR. What kind of timber do you log?

Mr. CHINN. Mostly fir; some cedar and hemlock; no spruce.

Mr. FREAR. No spruce. Did you build any roads last year?

Mr. CHINN. Yes, sir.

Mr. FREAR. How much, or how many miles would you say?

Mr. CHINN. Oh, I should say a mile or two.

Mr. FREAR. Just short?

Mr. CHINN. Yes, sir.

Mr. FREAR. What kind of road was it?

Mr. CHINN. Standard gauge 56-pound rail, over which we operate an 85-ton locomotive.

Mr. FREAR. How much road have you there—railroad?

Mr. CHINN. Between 8 and 10 miles.

Mr. FREAR. Could you tell, just generally, what the average cost per mile was for building the roads last year for your purposes?

Mr. CHINN. I have not the exact figures, but I can state approximately that it would be somewhere between \$12,000 and \$15,000 a mile, complete. Of course, I might qualify that by saying that I don't buy rails, because they are furnished by the common carrier railroad to me, under contract; I pay rental; but, assuming that I bought the rail, I should say that that would be it.

Mr. FREAR. I understand you figure the cost of the rails in that?

Mr. CHINN. Yes.

Mr. FREAR. Here is a statement that was put in evidence this morning, on which Mr. Lightner was examined. Are you familiar with that statement?

Mr. CHINN. Yes, sir.

Mr. FREAR. That was prepared by your organization, was it?

Mr. CHINN. Yes, sir.

Mr. FREAR. And what position do you hold in the organization?

Mr. CHINN. I am vice president and manager of it.

Mr. FREAR. Just tell the committee, briefly, what is the meaning of that, in addition to what it shows.

Mr. CHINN. The meaning of this, briefly stated, was to find out which is the purpose, as the name indicates, of this association, for information. We wanted to know what it cost to build railroads last year; consequently, what you might call a questionnaire was drawn up, asking the different details of information regarding railroad building to be sent in to the head office in this city. From these statements made by the individual companies a composite was made of them all, giving the details of each one and the average cost per station of completed grade, as shown here.

Mr. FREAR. How many different companies are reporting there?

Mr. CHINN. I think there are 14.

Mr. FREAR. What was the average cost per mile for the year 1918?

Mr. CHINN. There are 18 here.

Mr. FREAR. That is the year 1918, is it?

Mr. CHINN. No; there are 18 companies here.

Mr. FREAR. Oh, 18 companies?

Mr. CHINN. Yes.

Mr. FREAR. What year was that prepared for?

Mr. CHINN. Let me correct that question. [Examining paper.] Fourteen is right.

Mr. FREAR. Fourteen?

Mr. CHINN. Yes, sir.

Mr. FREAR. What year?

Mr. CHINN. 1918.

Mr. FREAR. That is for last year?

Mr. CHINN. Yes, sir.

Mr. FREAR. The average cost per section, is it?

Mr. CHINN. Station, a hundred feet.

Mr. FREAR. Shows to be \$67 there?

Mr. CHINN. Yes, sir.

Mr. FREAR. And a fraction?

Mr. CHINN. Yes, sir.

Mr. FREAR. And that is, as has been testified, \$3,300 a mile?

Mr. CHINN. Yes, sir.

Mr. FREAR. That was the average cost of grading, for all these roads of the various companies?

Mr. CHINN. Yes; the idea being to get a general idea of the very conditions existing in different camps. No particular section was picked out.

Mr. FREAR. What would that average, per mile, in round numbers, for the railroads, after you put in the ties and the rails and completed the road so as to make it a first-class logging road, capable of carrying these engines like you are using on your line?

Mr. CHINN. Well, if conditions have always remained the same, it would not cost \$15,000.

Mr. FREAR. Well, I mean in 1918?

Mr. CHINN. Well, I mean the conditions of building, the character of the ground, etc.

Mr. FREAR. What would have been the average cost there, that is, considering that the roadbed is \$3,300 a mile—the grading of it—that is only one element; the committee wants to ascertain what it is in a completed shape.

Mr. CHINN. Well, I would have to figure that over and get it for you. I should say that the rails would cost about in the neighborhood of \$5,000 per mile.

Mr. FREAR. \$5,000 a mile?

Mr. CHINN. Yes, I guess I have got that figure. How much did you say?

Mr. FREAR. Can't you give us something there? I have asked this several times, and I am trying to get it?

Mr. CHINN. I think Mr. Lightner has the figures.

Mr. FREAR. I thought you figured it. We have Mr. Lightner's statement, but I wanted to get one or two others who are familiar with it, so as to have it.

Mr. CHINN. That would be about \$3,000 for rails—60-pound rails. If I can get this statement to-night for you, will that serve the purpose?

Mr. FREAR. Yes, that will be satisfactory.

Mr. CHINN. I want to be correct on that.

Mr. FREAR. Did you have any dealings with Col. Disque, or any of the folks down there during the war in reference to furnishing spruce, acting on behalf of the loggers' association?

Mr. CHINN. Yes.

Mr. FREAR. Just briefly state what it was?

Mr. CHINN. The Loggers' Information Association maintains its own employment office here. We sent out from a thousand to fifteen hundred men a month and maintained that office.

Mr. FREAR. You sent out men to work in the different camps?

Mr. CHINN. Yes. The principal difficulty that arose causing negotiations between us was violations of the wage schedule as established by the Spruce Production Division, and one of the principal causes for complaint was the Seims-Carey-Kerbaugh operation, which persistently violated the wage schedule to which we were all compelled to conform.

Mr. FREAR. In what way was that evidenced?

Mr. CHINN. By excessive wages paid.

Mr. FREAR. How much and in what manner did it vary from the scale as furnished to you?

Mr. CHINN. I have some details of that in our office which I can furnish you.

Mr. FREAR. Just generally will be sufficient—anything. Just give the committee a general understanding of it. I do not know just how material that is.

Mr. MAGEE. The wage scales to which you were subjected and the wage scale paid by this company. As I understand, what the chairman wants is the wage scale to which you were subjected and the wage scale of the Seims-Carey-Kerbaugh Corporation.

Mr. CHINN. Common labor is the basis here. I think that frequently common labor was being sent out there for \$5 a day when we were limited to \$4 a day.

Mr. FREAR. They had the privilege, as you understood, of fixing a different price for labor?

Mr. CHINN. I believe in some instances contracts were let to individuals and they hired it at greater wages than we were allowed to pay as operators.

Mr. FREAR. And you say you were allowed to pay what? What was the situation in regard to that?

Mr. CHINN. A bulletin was issued by the Spruce Production Corporation which fixed in detail the wage of every situation in that logging camp—every job.

Mr. FREAR. And if you did not comply with that, what was the penalty?

Mr. CHINN. The penalty, as I understand it, was that your supplies of wire rope and of material of all kinds would be refused you through the priority arrangement if you did not comply with all conditions which the bulletin provided.

Mr. FREAR. Do I understand that there was any distinction made between the average logger and the Seims-Carey, Kerbaugh Corporation, from facts that came to your attention?

Mr. CHINN. I think there was an excessive wage paid there on occasion.

Mr. FREAR. When attention was called to it, if you did call attention to it, was it corrected?

Mr. CHINN. There was an attempt made to correct it, but it happened again.

Mr. FREAR. They persisted in it?

Mr. CHINN. Yes.

Mr. FREAR. What was the effect of it, if anything, in regard to the logging operation?

Mr. CHINN. It had a disquieting effect upon our labor. It is hard to keep one man in one camp at one wage when somebody else is paying more money.

Mr. FREAR. Did they furnish you soldiers?

Mr. CHINN. You are speaking of all camps now. Some camps had soldiers and others did not; our own particular one did not.

Mr. FREAR. You were not cutting spruce?

Mr. CHINN. Were cutting ship timbers largely.

Mr. FREAR. And you got your labor from what sources?

Mr. CHINN. Through our employment office here.

Mr. FREAR. You did not use any soldiers?

Mr. CHINN. No, sir.

Mr. FREAR. Did you ever meet Edward Donlin?

Mr. CHINN. No, sir.

Mr. FREAR. Do you know anything about the Hoko or Pysht routes?

Mr. CHINN. No, sir; no more than just to know the maps.

Mr. FREAR. Now briefly tell the committee what your experience was in regard to the furnishing of spruce, of your loggers association, and what effort you made, if any, to get the organization at Portland to accept all of your offers. You did have some negotiation?

Mr. CHINN. Yes. On September 20, 1918, a letter was written to the Puget Sound loggers, in my care, by Gen. Disque. Do you care to have me read it?

Mr. FREAR. You can tell just briefly what it relates to. It depends upon its importance.

Mr. CHINN. There is a good deal of importance to it.

Mr. FREAR. Then, read the letter and we can introduce it in evidence.

Mr. CHINN (reading):

PORTLAND, OREG., September 20, 1918.

From: Commanding officer.

To: Loggers, Puget Sound.

Subject: Clallam County logging.

1. The Government has entered into two contracts with the Siems-Carey-H. S. Kerbaugh Corporation, one of which provides for the construction of the main line railroad into Lake Pleasant, and the second contract calls for a large monthly production of spruce flitches.

2. To carry out this second contract it will be necessary for this company to bring out from Clallam County a minimum of approximately one and one-half million feet of spruce logs daily after the 1st of January next. Their estimates call for approximately 50 sides to do this logging—

Mr. FREAR. That means 50 spurs?

Mr. CHINN. No; 50 donkey engines, a set of one unit for logging.
[Continues reading:]

and they have placed orders for the necessary logging machinery. They feel confident that they can build up an organization that will be satisfactory to them and that this organization will be able to produce all the logs which they will require to fulfill their contract.

3. It seems quite apparent that in view of the present draft legislation that the man power of Puget Sound will not be sufficient to carry on the present logging industry and also supply sufficient labor to care for 50 additional sides. I also think it is true that if this enterprise goes forward as now planned your district will be flooded with logging machinery at the close of the present war, which will react on the value of your present equipment. It is my desire in all of our Government operations to avoid disrupting the logging industry wherever this is possible; and I have, therefore, requested the Siems-Carey-Kerbaugh Co. to first make an offer to the loggers of Puget Sound to contract their logging operations rather than follow their present plans of purchasing new equipment and creating a new organization. They came to Portland at my request and agreed heartily to adopt my suggestions; although they stated that, so far as they personally were concerned, they would much rather carry out their present plans.

4. They have authorized me to make the following proposition to you, which I have considered carefully and consider a very fair offer, namely, that they will be willing to enter into contract with either one or several large logging companies, which you may form, agreeing to pay a rental of 10 per cent and depreciation of 15 per cent per annum on all logging machinery and equipment which these concerns may furnish at their present agreed or appraised value; that they will pay all of the logging expenses of every kind and nature and pay a profit of \$1 per thousand for all logs produced.

5. Their proposed contract is to contain a provision that they may cancel the same or insist upon a change in management if the output is not satisfactory—

That, by the way, left the entire matter at the discretion of the Siems-Carey-Kerbaugh Co., after we got in there to throw us out any morning they saw fit. [Continues reading:]

or if the operation is extravagant in their opinion. They also agree to pay all expenses incident to moving equipment into the district as well as returning same to its present location at the termination of their contract. In case the contract is cancelled for cause, they are to have the option of retaining all of the equipment on the agreed rental basis if they care to do so.

6. This company is required to carry on selective logging operations, bringing out only the number one and two logs, which may reduce the output per side to a certain extent.

7. Time is of the essence of this offer and my understanding is that the same will be withdrawn within fifteen days if not accepted prior to that time.

BRICE P. DISQUE,

Colonel, Air Service, United States Army, Commanding.

Mr. FREAR. That is the end of the letter, is it?

Mr. CHINN. Yes.

Mr. FREAR. He writes that in the tone of a lawyer when he says, "Time is the essence of the contract," and suggests to your people the importance of immediate action within 15 days. What was the nature of the offer that he made to the loggers? What is the effect of the compensation that is offered?

Mr. CHINN. It is hard to tell. If we did selective logging, we would not know.

Mr. FREAR. This was for selective logging, was it?

Mr. CHINN. Yes; it is distinctly stated in this letter I have just read.

Mr. FREAR. You were to log at 10 per cent rental and 15 per cent depreciation?

Mr. CHINN. Yes.

Mr. FREAR. And a dollar for profit?

Mr. CHINN. Yes; a dollar for profit, over and above cost.

Mr. FREAR. What would that amount to?

Mr. CHINN. That is the point.

Mr. FREAR. I mean as to the general proposition? You had never done selective logging?

Mr. CHINN. No, sir.

Mr. FREAR. No one on the coast had done selective logging?

Mr. CHINN. No, sir.

Mr. FREAR. Do you know whether these people that had the contract had ever done selective logging?

Mr. CHINN. Not to my knowledge.

Mr. FREAR. Did Disque ever tell you what he thought would be the best form of logging?

Mr. CHINN. He told me that he thought that that would be the best form.

Mr. FREAR. Had he had any experience himself?

Mr. CHINN. I do not think so.

Mr. FREAR. Did he say he had?

Mr. CHINN. No.

Mr. FREAR. Or that he knew anything about it?

Mr. CHINN. No.

Mr. FREAR. He was not a logger or business man when he came out here, was he?

Mr. CHINN. We did not understand that he was. We understood that he was a soldier.

Mr. FREAR. And he says that he thinks that is a fair condition, doesn't he, in that letter, as you read it?

Mr. CHINN. Yes.

Mr. FREAR. And you were expected to take his judgment inside of 15 days, or you were out and subject to cancellation any time after you started the operation?

Mr. CHINN. Our answer of that would be of interest to you at this time.

Mr. FREAR. That was a fact, wasn't it? His right of cancellation at any time?

Mr. CHINN. The Siems-Carey, Kerbaugh Co. right of cancellation.

Mr. FREAR. That is what I mean—the Siems-Carey, Kerbaugh right of cancellation. Provided you entered into a contract which stated that they could have your entire equipment left in their hands high and dry at any time.

Mr. CHINN. Yes.

Mr. FREAR. And you were not ready to accept such a proposition?

Mr. CHINN. I will read you my answer.

Mr. FREAR. That was the proposition made to you by Disque?

Mr. CHINN. Yes. My answer was this [reading]:

At a meeting of the Loggers' Information Association, held on the 21st day of September, 1918, at Seattle, Wash., the following resolution was unanimously adopted:

At a meeting held in the fall of 1917 the Lumbermen's Protective League, of which the undersigned is a member, the services of themselves, their organization, and their equipment was unanimously tendered to the United States for the winning of the war, and in the filling of its requirements of lumber and more particularly in its plans to increase the production of spruce and other aeroplane material. We, the Loggers' Information Association, of Puget Sound, having a joint input of 1,000,000,000 feet per year, in meeting assembled, again tender to the United States Government direct our services, organizations, and equipment without profit in the logging and opening up the spruce tract of Clallam County on the Olympic Peninsula. We consider as unnecessary and destructive to a large and important industry the continuation of the operation of the so-called Siems-Carey Co., and ask that it, in the public interest, be canceled.

Mr. FREAR. When was this?

Mr. CHINN. September 21, 1918, the following day after the receipt of Gen. Disque's letter.

Mr. FREAR. Disque wrote you in effect, as I remember the language, that you are liable to be flooded with machinery. Was that his term?

Mr. CHINN. Yes.

Mr. FREAR. Unless you accepted this proposition coming from the Siems-Carey-Kerbaugh Corporation?

Mr. CHINN. Yes.

Mr. FREAR. And they were given the exclusive right?

Mr. CHINN. Yes.

Mr. FREAR. Did you know the Siems-Carey-Kerbaugh Corporation, or know who they were?

Mr. CHINN. I never heard of them until they came here. I knew them then.

Mr. FREAR. Did he give any additional reason there why the loggers of this country should be required to accept such terms, in person or by letter to you?

Mr. CHINN. We were later told that if the worst came to the worst, and labor became so short that it would not go around, that neces-

sarily the present cost-plus operation would have to be supplied with the labor first, in order to furnish the Government with its spruce.

Mr. FREAR. I mean, did he give you any reason why this company had been selected and given exclusive control of the situation there?

Mr. CHINN. No, sir.

Mr. FREAR. None?

Mr. CHINN. No, sir; none.

Mr. FREAR. Was it your judgment in view of your experience and your connections, that that was a reasonable or ordinary proposition in times of peace or war?

Mr. CHINN. It was our opinion that it was very unusual and very unnecessary, and that we, as loggers, with a lifetime of experience in this particular work could probably do logging a little bit better than anybody else, especially in the Pacific Northwest; that is what we thought.

Mr. FREAR. This put practically all of your assets that were involved in the logging proposition into the hands of the Siems-Carey-Kerbaugh Corporation, provided they wished to cancel at any time?

Mr. CHINN. Yes.

Mr. FREAR. That was a proposition that did not appeal to you, you say?

Mr. CHINN. No, sir. And the effect of our answer was that we did not want to do any business as subcontractors under Siems-Carey and we offered our equipment and ourselves to the United States Government.

Mr. FREAR. Had you been doing business as loggers with the Government prior to that time?

Mr. CHINN. Yes; producing spruce. We did business direct, and those who received soldiers were doing business direct with the Government, and all of us in so far as we were affected by the wage bulletin as issued, had dealings with the Government.

Mr. FREAR. Prior to this time you had always entered into contractual relations directly with the parties there, had you, in Portland, when furnishing spruce or other material to the Government?

Mr. CHINN. I never had any personal contractual relations, but the industry did.

Mr. FREAR. This substituted for Col. Disque the Siems-Carey-Kerbaugh Corporation, as I understand it?

Mr. CHINN. That would be the effect of this.

Mr. FREAR. That is the effect of the letter?

Mr. CHINN. Yes.

Mr. FREAR. Who were the Loggers' Information Association you spoke of? Is that the same as the Lumbermen's Protective Association?

Mr. CHINN. No, sir. That was an organization which went out of existence in 1917, I believe.

Mr. FREAR. And was succeeded by this Loggers' Information Association?

Mr. CHINN. Not particularly; no.

Mr. FREAR. What was that organization, who composed it, just briefly?

Mr. CHINN. The Loggers' Information Association?

Mr. FREAR. Yes.

Mr. CHINN. Do you want the names of the companies?

Mr. FREAR. Just briefly. Were they logging companies?

Mr. CHINN. Absolutely.

Mr. FREAR. A number of them?

Mr. CHINN. There were about 25 of them, comprising with one or two exceptions the largest operations on Puget Sound.

Mr. FREAR. So that when your communication went out it went out under the name of this organization?

Mr. CHINN. Yes.

Mr. FREAR. And you offered there to act direct with the Government?

Mr. CHINN. Yes.

Mr. FREAR. What response did you get to that communication, if any?

Mr. CHINN. This telegram was sent to Maj. Eastman in reply and submitted to our office. Maj. Eastman, by the way, was one of the officers representing Col. Disque in these negotiations with us. This was sent from Col. Disque to Eastman in reply [reading]:

If agreeable to Carey, accept loggers' proposition on same basis Frost contract—

That contract was one taken by the loggers down in Yaquina Bay.

Mr. FREAR. That was the contract testified to by Mr. Frost yesterday, wherein he was to get \$20 profit off the investment of a good many hundred thousand dollars?

Mr. CHINN. Yes; without profit.

Mr. FREAR. Without profit?

Mr. CHINN (reading:)

If agreeable to Carey, accept loggers' proposition on same basis Frost contract, except operation main line railroad. The Government to acquire all stumpage and own logs and eliminate from Carey contract all interest in logging operations. This will require modification Carey contract, probably cancellation and making new one for them to operate all main line railroad and saw such portion of logs as we agree upon as understood by Hitchcock and Carey. Express to Carey my deep appreciation his patriotic attitude in matter, and before closing we must have assurances loggers will form into one company and guarantee same log input as Carey is now obligated to produce as to time and quantity, and definite arrangements made as to equipment assignment, etc., within 12 days; also assure logging operators that we appreciate their action and will certainly bring their patriotic action to attention of the Washington Government.

Disque.

Mr. FREAR. Did you consider that a sincere telegram?

Mr. CHINN. No, sir.

Mr. FREAR. What did you consider it to be, framed as it was and under the conditions that existed then?

Mr. CHINN. We considered that Siems-Carey had undertaken a contract for selective logging that they could not fulfill, and that, therefore, we would not undertake something that we did not think could be done.

Mr. FREAR. But Carey's patriotic action, as I understand it there, did not have any reference to the \$25,000,000 fitches?

Mr. CHINN. No, sir.

Mr. FREAR. He retained that contract given by the Portland end and simply tried to unload the logging end of it upon you people, did he not?

Mr. CHINN. The result of that would be that we would have been logging raw material for the Siems-Carey-Kerbaugh Corporation

and delivering same to them to be sawed into fitches, for which they had a contract with the Government.

Mr. FREAR. And he called that a patriotic offer?

Mr. CHINN. Yes; apparently so.

Mr. FREAR. And he was willing to accept that service if you did not make a dollar? And he sent that telegram to whom?

Mr. CHINN. He sent that telegram to Maj. Eastman, who had been in conference with us at the time we adopted the resolution I have just read you, and which he submitted to Disque, and Eastman showed me a copy of this telegram and gave me a copy of it.

Mr. FREAR. What next occurred, if anything, with relation to your negotiations, if you had any?

Mr. CHINN. Col. Disque wrote us a letter in confirmation of this telegram, which is as follows [reading]:

PORTLAND, OREG., September 24, 1918.

From: Commanding officer.

To: Loggers' Information Association.

Subject: Clallam County.

1. In accepting your patriotic offer made on the 21st day of September, 1918, at a meeting held in Seattle, Wash., wherein you agree to furnish all necessary equipment and to log without profit the spruce tract of Clallam County on the Olympic Peninsula, I wish to call your attention to the fact that the equipment which you are to furnish will of necessity have to be the best equipment which your district can furnish and in an amount sufficient to produce a minimum of 500,000,000 feet of No. 1 and No. 2 spruce logs within the year 1919, fairly proportioned over each month, commencing with January, 1919.

2. During the first three months of the coming year I feel quite sure that you can only count upon 15 working-days in each of these months, which means that to provide necessary minimum output you will have to have at least 65 sides immediately available. You will also have to secure approximately 30 geared engines, the major part of which will have to be 60 tons or better.

3. Time is the essence of this operation, and I must have almost immediate assurance that your association will be able to acquire the necessary equipment to handle this immense undertaking. I therefore must request that the loggers of Puget Sound sign an agreement, stating the number of sides which they will be willing to furnish, as well as the number of geared engines and the amount of steel rails, this agreement to provide that they will permit the manager, whom you may choose, together with a representative of this department, to select this equipment in complete sides from the loggers in question. By following this plan the possibility of unsatisfactory machinery being offered will be avoided. This agreement, providing for sufficient equipment to handle this operation, must be in my hands by the 3d of October.

4. The Siems-Carey-H. S. Kerbaugh Corporation have voluntarily agreed to cancel their contract so far as logging is concerned, limiting their profit in their entire operation to 7 per cent on the cost of the balance of other operations. This has been done on their part so that the United States Government can be permitted to accept the liberal offer made by your association.

5. I wish to extend to the members of your association my appreciation of your patriotic action in this matter and will see to it that you will receive due recognition for the same.

6. You will be permitted, of course, to pay a rental of 10 per cent per annum, and 15 per cent per annum depreciation, on all equipment furnished, this percentage to be figured on the appraised value of the equipment. You will also be permitted to pay a rental charge of 12 per cent on rails. I will also permit the payment of a reasonable compensation to men actually engaged in the management of this organization. You must appreciate, however, that high salaries can not be approved in Government operations.

7. The large size of the timber in this district will require all yarding engines to be 11 by 13 or larger.

8. I inclose herewith suggested form of agreement to be signed by the loggers.

BRICE P. DISQUE,
Colonel, Air Service, United States Army, Commanding.

Mr. FREAR. Is that right, if you have read it properly? I have not seen the letter before.

Mr. CHINN. Yes, sir.

Mr. FREAR. The first paragraph reads:

In accepting your patriotic offer made on the 21st day of Setember, 1918, at a meeting held in Seattle, Wash., wherein you agree to furnish a necessary equipment and to log without profit the spruce tract of Clallam County on the Olympic Peninsula, I wish to call your attention to the fact that the equipment which you are to furnish will of necessity have to be the best equipment which your district can furnish and in an amount sufficient to produce a minimum of 500,000,000 feet of No. 1 and No. 2 spruce logs within the year "1919", fairly proportioned over each month, commencing with January, 1919.

Do you know whom he consulted with before he made such a proposition?

Mr. CHINN. No.

Mr. FREAR. Do you know that he consulted with anyone here on the coast who was familiar with logging operations before he made the proposition?

Mr. CHINN. No; I do not know.

Mr. FREAR. Here was a proposition, if I gather rightly, requiring your organization as a patriotic organization that was going to contribute everything free, to furnish 500,000,000 feet of logs within the year?

Mr. CHINN. Yes, sir.

Mr. FREAR. With "the best equipment." He laid down all the conditions if you were going to be patriots and if you were going to make the contribution?

Mr. CHINN. Yes, sir.

Mr. FREAR. (Reading:)

2. During the first three months of the coming year I feel quite sure that you can only count upon 15 working days in each of these months, which means that to provide necessary minimum output you will have to have at least 65 sides immediately available. You will also have to secure approximately 30 geared engines, the major part of which will have to be 60-ton, or better.

What was that—a large or a small proposition?

Mr. CHINN. That was a large proposition.

Mr. FREAR. Do you know whether he made that condition with Siems-Carey-Kerbaugh & Co., or did he say to them, "You shall have priorities and the Government shall stand behind you and give them to you"?

Mr. CHINN. I do not know the details of that feature of their contract; but I believe it is generally understood that they had no logging equipment when they came here.

Mr. FREAR. They were not loggers, were they?

Mr. CHINN. No.

Mr. FREAR. So, necessarily, they had to get what was supplied them from other loggers, or priorities from the manufacturers through the action of the Portland end?

Mr. CHINN. Yes, sir.

Mr. FREAR. (Reading:)

Time is the essence of this operation.

That is quite a familiar expression. [Reading:]

And I must have almost immediate assurance that your association will be able to acquire the necessary equipment to handle this immense undertaking.

How were you going to get it, did he suggest?

Mr. LEA. He suggested that they use what they had.

Mr. CHINN. The proposition was to use what we had.

Mr. FREAR. Yes; but he puts it up here—"the best equipment which your district can furnish." Does that mean your association or your district?

Mr. CHINN. It means the loggers in our district.

Mr. FREAR. The gentlemen in your association? He says "your district." Possibly he meant your association; but that was what I understood. It might be difficult for you to go in and use your entire machinery, unless you had the power to commandeer which was possessed down in Portland.

Mr. CHINN. It was Gen. Disque's idea to have every logger participate in this, so far as they were available, and to give all loggers of Puget Sound—

Mr. FREAR. An equal opportunity to perform a contract without any return, in which all these conditions were imposed?

Mr. CHINN. Yes, sir.

Mr. FREAR. He says:

I, therefore, must request that the loggers of Puget Sound sign an agreement, stating the number of sides which they will be willing to furnish, as well as the number of geared engines, and the amount of steel rails. This agreement to provide that they will permit the manager, whom you may choose, together with a representative of this department, to select this equipment in complete sides from the loggers in question. By following this plan the possibility of unsatisfactory machinery being offered will be avoided.

He reserves the right to determine what machinery you shall have there, does he not?

Mr. CHINN. Yes, sir.

Mr. FREAR. Then you did not have the determination of it. Let us see:

This agreement to provide that they will permit the manager, whom you may choose, together with a representative of this department, to select this equipment, in complete sides, from the loggers in question.

Supposing he found it was not satisfactory equipment, according to his judgment?

Mr. CHINN. I should think if his manager did not like it, he would not have to take it.

Mr. FREAR. You would be in the same position almost as if you were dealing with Siems-Carey-Kerbaugh Co. if you had accepted the proposition in their telegram. [Reading:]

This agreement, providing for sufficient equipment to handle this operation, must be in my hands by the 3d of October.

Must be. From September 24 to October 3 was 10 days. [Reading:]

The Siems-Carey-H. S. Kerbaugh Corporation have voluntarily agreed to cancel their contract so far as logging is concerned.

They did not have any contract for logging, did they?

Mr. CHINN. I am not familiar enough to testify to that.

Mr. FREAR. Their contract was for flitches?

Mr. CHINN. That is what I understand.

Mr. FREAR. From the 50,000,000 feet of flitches?

Mr. CHINN. That is what I understand.

Mr. FREAR. There is no contract for logging submitted.

Mr. LEA. They had to procure the logs?

Mr. FREAR. Yes; but they could buy the logs and saw the flitches, and they were paid for that. They did not have to go into the logging.

Mr. CHINN. That is what I understand.

Mr. FREAR. So they were not canceling anything, were they?

Mr. CHINN. No, sir.

Mr. FREAR (reading):

The Siems-Carey-H. S. Kerbaugh Corporation have voluntarily agreed to cancel their contract so far as logging is concerned, limiting their profit—

Here was their patriotic duty in which they were trying to keep up—

limiting their profit in their entire operations to 7 per cent on the cost of the balance of other operations. This has been done on their part so that the United States Government can be permitted to accept the liberal offer made by your association.

I wish to extend to the members of your association my appreciation of your patriotic action in this matter and will see to it that you will receive due recognition for the same.

What do you suppose he was going to do, give you decorations?

Mr. CHINN. I do not know.

Mr. FREAR. He goes on to say:

You will be permitted, of course, to pay a rental of 10 per cent per annum and 15 per cent per annum depreciation on all equipment furnished. This percentage to be figured on the appraised value of the equipment. You will also be permitted to pay a rental charge of 12 per cent on rails.

How was that figured out? I do not know; I am asking for information.

Mr. CHINN. I know the Northern Pacific Railroad charges a rental of 12 per cent, or did under normal conditions, for the use of rails. I suppose that is something of the same nature.

Mr. FREAR. But this was in time of war.

Mr. LEA. Twelve per cent on the value.

Mr. FREAR. Would that make any difference, the time? It would be practically the same, would it?

Mr. CHINN. I presume so; yes.

Mr. FREAR. (Reading:)

I will also permit the payment of a reasonable compensation to men actually engaged in the management of this organization.

Did he let you know how much would be paid your men?

Mr. CHINN. No, sir.

Mr. FREAR. That is, a man who is a colonel in the Army down here would determine what your compensation should be when you are going to do the work for nothing. Is that right?

Mr. CHINN. That is the way it reads.

Mr. FREAR. Did he make any such suggestion in regard to the Siems-Carey-Kerbaugh Co. when the contract was let?

Mr. CHINN. Not so far as I know.

Mr. FREAR. (Reading:)

The large size of the timber in this district will require all yarding engines to be 11x13 or larger.

What is that, an ordinary condition?

Mr. CHINN. That is a fairly good-sized logging donkey.

Mr. FREAR. Then he sent you a suggested form of agreement for the loggers and says you are to get the loggers together and have them agree to those conditions within 10 days and come back with it signed?

Mr. CHINN. Yes, sir.

Mr. FREAR. Was that his ultimatum?

Mr. CHINN. Yes, sir.

Mr. FREAR. Did you accept it?

Mr. CHINN. No, sir. We did follow out his suggestion, however, and call all the loggers of Puget Sound together, including those that did not belong to our association.

Mr. FREAR. What was done then?

Mr. CHINN. We put this matter up to them.

Mr. FREAR. That is, put up his letter?

Mr. CHINN. His proposition, as far as it has reached this date, and this file goes on to show the operators that met at that time, and the procedure.

Mr. FREAR. What was it?

Mr. CHINN. It developed that the loggers of the Information Association were not satisfied with the terms as laid down and did not agree to undertake the contract.

Mr. FREAR. Could you undertake to take the contract?

Mr. CHINN. We did not feel that we could. Aside from that fact, other operators not associated with us thought that Siems-Carey were doing a good job of logging and should be left alone. If I remember the expression aright, it was that the Government should not change horses in the middle of the stream.

Mr. FREAR. It would be rather a difficult matter. They have been discussing here for the past two or three days the injustice to soldiers of being paid the same rate of pay that is paid to the boys in the trenches, who were being shot down in France, because they were working with civilians. Was there any injustice suggested to you in regard to the loggers who were requested to do the work free when Siems-Carey had a contract for 7 per cent?

Mr. CHINN. I do not think so.

Mr. LEA. Maybe I am mistaken. I think you misunderstand each other or I misunderstand you. As I understand, the loggers themselves came forward and volunteered in general terms.

Mr. CHINN. We received this letter from Gen. Disque first, dated September 20, outlining, as Mr. Frear read, the necessity for us to enter into these contracts with Siems-Carey or we would be without labor or without supplies, possibly.

Mr. FREAR. That is, it was used as a whip. That was the effect of it whether it was done purposely or not. You people felt you could not afford to comply with that, or did you not, in your response?

Mr. CHINN. In our first response we did comply and offered to do it for nothing, and in his final reply to us he put these conditions to be complied with.

Mr. FREAR. It might have meant a great loss to you the way it was put on you.

Mr. CHINN. Yes, sir.

Mr. FREAR. Supposing you could not have performed the requirements of 500,000,000 feet in a year, which is a condition which you say had never been attempted before?

Mr. CHINN. Yes.

Mr. FREAR. Did you control the railway?

Mr. CHINN. No, sir.

Mr. FREAR. You could not do it?

Mr. CHINN. No, sir; because we did not know what the railroad facilities would be.

Mr. FREAR. Siems-Carey could say, "You can not use my railroad to-day or to-morrow; I need it for my own service." And he said in that letter that it could be used only 15 days in certain months. How were you to get the logs to the market?

Mr. CHINN. That is what we could not see.

Mr. FREAR. Was it an impossibility?

Mr. CHINN. We thought it was an impossibility; yes, sir.

Mr. FREAR. Then what was done?

Mr. CHINN. As a result of that meeting we wrote to Col. Disque and told him that it would be impossible for us to take this contract under the Siems-Carey-Kerbaugh operation, but that we still offered to the Government our services and our machinery on any condition that the Government might see fit to designate.

Mr. FREAR. I ask if it was a physical impossibility—that is, if it was possible for your loggers association to have gone in there and on the Siems-Carey-Kerbaugh Railroad could you possibly have carried out those terms unless you had absolute control of the conditions?

Mr. CHINN. We did not think so; no.

Mr. FREAR. Well, that is 40,000,000 feet of logs that were to be gotten out every month. That is right?

Mr. CHINN. For 12 months.

Mr. FREAR. For the 12 months it was 500.

Mr. CHINN. Yes.

Mr. FREAR. Providing you could have done work 12 months, but he says 3 months you can use the road only half of the time; so that is practically 10½ months. That would be about 50,000,000 feet a month. Was that a large or a small proposition?

Mr. CHINN. That is very large.

Mr. FREAR. Your people were willing to help?

Mr. CHINN. Yes, sir.

Mr. FREAR. What was the final result of your negotiations?

Mr. CHINN. Nothing was done.

Mr. FREAR. No other offer was made.

Mr. CHINN. No, sir; except this letter which concluded this negotiation, written by us September 27. This was all very fast and done in a short time, to get all these men together. The letter is addressed to Col. Brice P. Disque, and is as follows:

DEAR SIR: At a meeting of this association, held on Saturday, September 21, certain resolutions were unanimously adopted, of which you were duly furnished a copy. To be fair and equitable to the entire industry, as well as to further insure the carrying out of the Government's spruce program, it was felt that all of the larger operators on Puget Sound, at least, should join and be interested with us in the carrying out of the terms of our offer.

To this end we have caused a general meeting of the industry to be held this morning, which was numerously attended by practically all of such operators, and to this meeting the whole matter was presented for consideration.

and approval. After full discussion this meeting adopted the inclosed resolutions, nearly one-half of those in attendance not voting.

Notwithstanding this action, this association holds itself ready to give in every other way every possible service to the Government in its war program.

That was the conclusion.

Mr. FREAR. What was the resolution you speak of there—was it long or short?

Mr. CHINN. I think it is a short one. [Reading:]

After extended discussion, motion was made by Mr. Ives that it was the sense of the meeting that the Siems-Carey-Kerbaugh Co. continue to build the railroad and to do the logging as contracted, so that the progress of the work will not be disturbed. Mr. Webb offered as a substitute motion, which was seconded by Mr. Reed, that a standing vote be taken to indicate those who wished to participate in taking over the logging portion of the contract direct from the Government, which would involve construction of logging spurs and tracks. The vote stood affirmatively 7, negatively 15, not voting 19. It was moved by Mr. Reed, seconded by Mr. Ives, that it was the sense of the meeting that those present are willing to have their equipment turned over to the Government on any equitable basis if it is found necessary.

Mr. FREAR. You used the term "Government" all the way through. Did you mean the Government or Col. Disque?

Mr. CHINN. We meant the Government.

Mr. FREAR. Col. Disque was talking as the Government. He says, "I," and tells you what to do.

Mr. CHINN. The reason that is worded in that way is to make a distinction between Siems-Carey-Kerbaugh and the Government.

Mr. FREAR. But, frankly, in doing business did you ever do business with men under those circumstances, either in time of war or peace?

Mr. CHINN. We never had any previous experience in war.

Mr. FREAR. You thought you were in war?

Mr. CHINN. But we thought we were in war at that time.

Mr. FREAR. You people were willing patriotically to do your duty?

Mr. CHINN. Yes, sir.

Mr. FREAR. Some of you did go down and agree to log the Blodgett tract.

Mr. CHINN. Yes, sir.

Mr. FREAR. Were you connected with them?

Mr. CHINN. I was connected with the original formation, but not in its final conclusion.

Mr. FREAR. And they were willing to go in and log that tract without profit just to show their disposition?

Mr. CHINN. Yes.

Mr. FREAR. And your people up here were in the same general frame of mind, that you wanted to show your patriotism?

Mr. CHINN. Yes, sir.

Mr. FREAR. Is there anything else?

Mr. CHINN. One question seemed to be of interest to your committee, and that was the question of the responsibility for the making or the signing of the Siems-Carey contract.

Mr. FREAR. Yes.

Mr. CHINN. I simply have this to say in that connection, that at a meeting called in Portland, I think sometime in August of 1918, Col. Disque asked the Pacific Northwest Loggers' Bureau directors, which is a combination of loggers of the 31 districts, including Columbia River Puget Sound, and Grays Harbor, to meet with him and make

or listen to a proposition to log spruce for the Government—the loggers. We did meet with him and discussed the matter.

Mr. FREAR. What time was that?

Mr. CHINN. In August, 1918. At that meeting many things were discussed, together with the details of selective logging. We told the colonel at that time our doubts as to the practicability of such logging, and he seemed to think at that time that it could be done for from about \$20 to \$22 a thousand.

Mr. FREAR. Did he tell you what he based his judgment on?

Mr. CHINN. No; he told us that was what he thought, and we men—there were nine of us, three from each district—after figuring the thing over, made up our minds that it could not possibly be done for less than \$50 a thousand, and whether that is too low or not I do not know, and nobody else does. I am inclined to think it is probably low. In making this request of us that we enter into these contracts he wanted the entire industry to form into one large corporation and take over all the logging, and I became interested at once, as coming from Puget Sound, to know what he would do about the Siems-Carey operations, and he then made the statement that that contract was let over his head in Washington and sent to him to administer.

Mr. FREAR. Which contract did he mean?

Mr. CHINN. The Siems-Carey contract.

Mr. FREAR. There are two contracts.

Mr. CHINN. He did not designate any distinction between those, which meant in effect that that contract was to be eliminated from this general subject of loggers, that he was discussing the entire industry as represented by the Pacific Northwest Loggers' Bureau.

Mr. FREAR. You understood that that contract was to remain in force because he had no authority to set it aside?

Mr. CHINN. Yes.

Mr. FREAR. Who was present at the time he made that statement?

Mr. CHINN. The directors of the Pacific Northwest Loggers' Bureau.

Mr. FREAR. Who were they?

Mr. CHINN. Nine in number, three from each district. I can read you their names. I find that I do not have a list of them, but I think I can give them to you. From Puget Sound, Mr. Horton.

Mr. FREAR. Connected with what?

Mr. CHINN. The Pacific Northwest Loggers' Bureau.

Mr. FREAR. Where is he located?

Mr. CHINN. He is a logger in Puget Sound.

Mr. FREAR. What is his home address?

Mr. CHINN. Seattle. Also Mr. English, of Seattle, and myself, of Seattle. Mr. Stout, of Aberdeen; Mr. Morley, Aberdeen; Mr. Callow, of Aberdeen; Mr. Kirk, of Portland; Mr. Bradley, of Portland; and Mr. Ellis, of Portland, who was not in the city at that time, and therefore not present at the meeting.

Mr. FREAR. There were eight present?

Mr. CHINN. Eight present.

Mr. FREAR. And he made this statement to eight people?

Mr. MAGEE. What impression did you get at this conference that he was in favor or against the entering into the contract with the Siems-Carey-Kerbaugh Corporation?

Mr. CHINN. I got the impression that he was not.

Mr. MAGEE. From what he said?

Mr. CHINN. From what he said, yes.

Mr. MAGEE. That he was giving this as an excuse for himself, by stating that it was entered into at Washington over his head?

Mr. CHINN. That was my interpretation of it; yes, sir.

Mr. MAGEE. Was that the impression that the other men got?

Mr. CHINN. I could not say as to that. Mr. Horton is here and will testify as to that feature if you so desire.

Mr. MAGEE. Are any of the other gentlemen here?

Mr. CHINN. None of the others are here. You will probably see them in Portland or Gray's Harbor if you go there.

Mr. MAGEE. That was the impression you got?

Mr. CHINN. Yes, sir.

Mr. FREAR. He did not attempt to cancel that contract, and the two contracts were the ones that he did not venture to interfere with for the reason assigned?

Mr. CHINN. Yes, sir.

Mr. FREAR. Here were nine people representing three different logging districts?

Mr. CHINN. Yes, sir.

Mr. FREAR. What was the total logging capacity; that is, what was the output approximately?

Mr. CHINN. We figured approximately about two and a half billion feet a year.

Mr. FREAR. That is, that this association of loggers would put out two and a half billion a year?

Mr. CHINN. Yes.

Mr. FREAR. And you people were there urging that your services be accepted, providing any understanding could be reached. Is that right?

Mr. CHINN. No. At that time he asked us to come and discuss this feature with him. The impression I got at that time was that the cost-plus production was falling down and the general was beginning to feel that something must be done.

Mr. FREAR. That was in August?

Mr. CHINN. Yes.

Mr. FREAR. That is right. I was thinking about the earlier date. Is there anything else you think of?

Mr. CHINN. Only this, that our association has the complete file of all the letters which passed between the industry and the Government or the Spruce Production Division as far as they came under our attention, all of which will be available to you gentlemen at any time, and we only ask that you call on us for that. This is kept in the nature of a record as affecting an industry and as interesting an industry.

Mr. MAGEE. Is there anything in that record which you think will give any light upon this situation, or anything which the committee ought to know in getting at the facts beyond what you have given us?

Mr. CHINN. I assume that you all know that on the day the armistice was signed, that being the regular monthly meeting of the board of directors of the Pacific Northwest Loggers' Bureau, November 11, they were in session, and that they immediately sent a telegram to

John D. Ryan, as director of aircraft; to Col. Disque, as commanding officer of the Spruce Production Division; to Attorney General Gregory, and to Mr. Charles E. Hughes—I have forgotten whether we sent to anyone else or not, but we tried to make it inclusive—asking that—I think I have the resolution here, which is as follows:

At a meeting held at Seattle, November 11, 1918, of the Pacific Northwest Loggers Bureau, composed of the operators on Puget Sound, Grays Harbor, Columbia River, and outlying districts, whose input represents about three billion feet of logs annually, it was unanimously resolved that the urgency of spruce airplane production has now passed, it is recommended and urged that all cost plus airplane material operations be forthwith canceled as wasteful, extravagant, and now not in the public interest; as well as greatly demoralizing to the lumber interest of the entire Northwest. Further that the investigation recommended in the report of Mr. Charles E. Hughes be promptly made.

Mr. FREAR. What proportion of the entire logging industry of the State of Washington would you say was represented by your association; that is, what is the total logging if your people log from two billion and a half to three billion feet?

Mr. CHINN. That is not all Puget Sound, the two billion and a half.

Mr. FREAR. I understand that. What proportion was represented by the gentlemen down there who met Col. Disque?

Mr. CHINN. The entire Northwest.

Mr. FREAR. The entire Northwest?

Mr. CHINN. I do not believe I could state that correctly.

Mr. FREAR. You state in that resolution, 3,000,000,000 feet.

Mr. CHINN. Yes.

Mr. FREAR. What is the total logging every year of the State of Washington?

Mr. CHINN. The total output is about 4,000,000,000 feet, as I recollect.

Mr. FREAR. That would be about 75 per cent?

Mr. CHINN. Of sawed lumber.

Mr. FREAR. How would that compare with the logs? It overruns?

Mr. CHINN. Yes.

Mr. FREAR. So that, generally speaking, you represented practically 75 per cent of the loggers?

Mr. CHINN. Yes.

Mr. FREAR. Were those contracts canceled, or did you receive any response to any of these telegrams?

Mr. CHINN. We received response from—I haven't it with me, but received a response from Col. Disque first, indirectly, coming to us through Mark E. Reed, of Shelton, Wash., who was a director of the Spruce Production Corporation. He had a telegram forwarded by him by Maj. Stearns, which asked who had passed this resolution, and why they had passed this resolution, and who questioned the conduct or procedure of the Spruce Production Corporation in fulfilling its obligations in their completeness.

Mr. FREAR. Did you send him an apology because you had questioned it?

Mr. CHINN. No, sir. I explained to Mr. Reed exactly who we were and that I suggested, as president, that we saw no reason for complaint on anybody's part that if there was something to be investigated, as suggested by Mr. Hughes, there was no reason why it

should not be investigated, and nobody should object. That was, in effect, that telegram.

Then we received a telegram a little later from John D. Ryan, asking who the Pacific Northwest Loggers' Bureau were, and specifically who the directors were.

Mr. FREAR. That is, Mr. Ryan as well as Col. Stearns—or Maj. Stearns at the time—wanted to know who it was that was acting for the cancellation of cost-plus contracts?

Mr. CHINN. Yes, sir; in detail.

Mr. FREAR. Yes; and who it was that was asking that this investigation be held.

Mr. CHINN. Yes, sir; that seemed to be the main concern.

Mr. FREAR. But they knew what your association was, didn't they; hadn't that been explained to the Portland end before?

Mr. CHINN. Gen. Disque had asked this association in the previous August to meet in his office with him. The letters are on file in my office.

Mr. FREAR. What was your answer to this, if any?

Mr. CHINN. I have just stated what I told Mr. Reed. Mr. Ryan, we wired and told him practically the same that we told Mr. Reed, and further stated that we did not consider that it was necessary to name the board of directors at that time; but I signed the letter to him as president.

Mr. FREAR. Did you have a board of directors at the time?

Mr. CHINN. Yes, sir.

Mr. FREAR. Was there any particular object in refusing?

Mr. CHINN. Only this, that we were nine men representing the large part of the logging industry, and I did not feel that it was up to me to commit these other men, who live in various districts, to putting their names down until I had their consent, and I did not think that Mr. Ryan was any more justified in asking us the personnel of our board of directors at that time than I would be in asking him the personnel of the board of directors of the Chicago, Milwaukee & St. Paul Railroad if they had undertaken to require something of me.

Mr. FREAR. Have you discussed this subject with any of your directors? I understand it was at a meeting of the loggers on that day that you passed the resolution?

Mr. CHINN. Yes, sir.

Mr. FREAR. And then that was the resolution that was forwarded?

Mr. CHINN. That was the resolution.

Mr. FREAR. You never heard from Mr. Ryan afterwards?

Mr. CHINN. No, sir.

Mr. FREAR. Do you know whether he canceled the cost-plus contracts at that time?

Mr. CHINN. No; I do not.

Mr. FREAR. Do you know whether he asked to have the investigation carried on?

Mr. CHINN. No, sir.

Mr. FREAR. Is there anything else that occurs to you, Mr. Chinn?

Mr. CHINN. I think that covers the matter. It might be that you would want to call me later to furnish certain of this correspondence to which I have referred.

Mr. FREAR. Well, you have read practically the letters that are in the file there, haven't you?

Mr. CHINN. Well, only in regard to this Siems-Carey contract, but the correspondence on these other subjects is all on file in my office.

Mr. FREAR. I see.

Mr. CHINN. I might state that Gen. Disque is quoted in an interview with him in the Oregonian immediately subsequent, or shortly subsequent to our sending this resolution, stating that he did not know who the Pacific Northwest Loggers' Bureau was. I wrote him a letter and registered the letter asking him if he was correctly quoted. I never received any reply.

Mr. MAGEE. How long had he been on the coast at that time?

Mr. FREAR. This was just before the armistice.

Mr. CHINN. What was the question?

Mr. MAGEE. How long had Gen. Disque been on the coast.

Mr. CHINN. This was after the armistice. You mean when did he come here?

Mr. FREAR. He said he didn't appear in that list.

Mr. MAGEE. I simply asked how long Gen. Disque had been on the coast at that time?

Mr. CHINN. I do not believe I know. He had been here for some time.

Mr. MAGEE. You leave it rather uncertain in reference to your records. I would like to ask whether there is anything in those records that would show or tend to show who was instrumental in bringing about the execution of the Siems-Carey-Kerbaugh Corporation contracts?

Mr. CHINN. No, sir; I do not remember that there is.

Mr. MAGEE. That is all.

Mr. LEA. The cost-plus contract operations did cease shortly after this or about that time, didn't they?

Mr. CHINN. About the time of the armistice?

Mr. LEA. Yes.

Mr. CHINN. I think they did; yes, sir.

Mr. LEA. Was this telegram sent with the knowledge that the armistice had been signed or before you learned of it?

Mr. CHINN. With the knowledge that it had been signed.

Mr. LEA. Nobody anticipated that the work would proceed at that time, did they?

Mr. CHINN. Well, I do not believe that any of us had any definite knowledge as to that or had formed any opinion.

Mr. LEA. Now, as I understood from you, referring to this conversation of Gen. Disque in which he stated that the Siems-Carey contract had been made in the East, you are in doubt as to what contract that related to. I simply want to know—

Mr. CHINN. My doubt—we didn't know the details of the Siems-Carey contract at that time. No one, as far as I know, on the coast at that time had been told the absolute details of that contract.

Mr. LEA. Had you been discussing with him logging operations or railroad operations?

Mr. CHINN. We had been discussing with him logging operations, which to our mind usually conveys the entire operation, including railroad construction.

Mr. LEA. So you are not able to state whether he referred to the whole Siems-Carey transaction or just the logging operations?

Mr. CHINN. I am not able to state, because none of us had access to that contract at that time.

Mr. LEA. Now, to what place were you to deliver the logs that you were negotiating for?

Mr. CHINN. To make that clear to you, Mr. Lea, this transaction we had was to cover the entire Northwest, which is the district from Yaquina Bay to the British Columbia line, so it would be varied.

Mr. LEA. I had reference, though, to the meeting in September, I believe, when you considered taking over the Carey logging operations—the Siems-Carey logging operations.

Mr. CHINN. Yes. Will you ask your question again now, please?

Mr. LEA. I wanted to know about what place you were to make delivery of logs if you took over the Siems-Carey operations—that is, the logging operations.

Mr. CHINN. Well, my recollection—the only writing we had covering this matter is in the letters read, which do not designate that point.

Mr. LEA. Wasn't the negotiation based on the idea that they were to be delivered in the Lake Pleasant territory, to the railroad there?

Mr. CHINN. My recollection is, and I would want verification of this, that we were to deliver our logs onto that loop, which would also be operated by Siems & Carey. That is my recollection.

Mr. LEA. So that so far as you were called upon to perform you would have completed your obligation when you delivered the logs?

Mr. CHINN. Yes; that is my understanding.

Mr. LEA. It would be immaterial to you financially who operated the railroad, or whether or not it was operated, while, as a matter of operation, it would be very material to us, the logging feature?

Mr. CHINN. No; the railroad feature.

Mr. LEA. Well, if you performed your obligation when you delivered your log to the railroad—

Mr. CHINN. Yes.

Mr. LEA (continuing). Why were you interested in who operated the railroad?

Mr. CHINN. I think I can explain that to you very thoroughly.

Mr. LEA. Yes; if you will.

Mr. CHINN. If Siems & Carey, for instance, still continued to operate a portion of that themselves, and I was, or some other logger over here operating and delivering to this main-line railroad, and this morning this operation is short of cars and so am I, it would be natural to expect that their own operation would receive the preference. There would be a very serious objection, without going any further.

Mr. LEA. As I understand it, the final proposition was that you take over the whole operation?

Mr. CHINN. No; we never understood that we were to have anything to do with the railroad.

Mr. LEA. No; I do not mean the railroad, but you were to take over the whole logging operations?

Mr. CHINN. Yes; I believe that was contemplated.

Mr. LEA. So that when you delivered your log, regardless of railroad operation, you would have completed your obligations?

Mr. CHINN. Yes.

Mr. LEA. Now, I do not know as I understand in reference to the provision about the cancellation of the contract, whether or not you objected to that?

Mr. CHINN. Yes.

Mr. LEA. As I understand it, the contract that they proposed reserved to the Government the right to cancel, provided the operation was not carried on satisfactorily to the Government?

Mr. CHINN. Yes.

Mr. LEA. Now, didn't you recognize that practically every emergency contract made during the war contained a cancellation provision? I am not finding fault with that, but just to get an understanding.

Mr. CHINN. I understand. My idea would be that I would hate to enter into any such contract, with the power of cancellation in the hands of somebody else.

Mr. LEA. It is undoubtedly objectionable from the standpoint of the contractor.

Mr. CHINN. Yes.

Mr. LEA. Yet, as a matter of fact, in the great majority of contracts for emergency construction that provision was in the contract.

Mr. CHINN. That I do not know.

Mr. LEA. And there was a provision of that character in the Siems-Carey-Kerbaugh contract.

Mr. CHINN. I do not know.

Mr. LEA. As a practical proposition, whoever assumed the obligation that Siems-Carey-Kerbaugh assumed in their logging contract, assumed a great responsibility, didn't they?

Mr. CHINN. Yes, sir.

Mr. LEA. It was a hard contract to fulfill.

Mr. CHINN. We think impossible.

Mr. LEA. And to put up a bond for its fulfillment was a serious matter, wasn't it?

Mr. CHINN. Yes, sir.

Mr. LEA. You did not object to that condition on account of its being any unusual condition that was sought to be applied to you loggers, did you?

Mr. CHINN. That was one of them.

Mr. LEA. You did not think that you were singled out for any particular hardship or handicap different from other people in the war transactions?

Mr. CHINN. We did not, as I remember it, think about whether we were singled out or not. We didn't like that provision; that was my idea of it.

Mr. LEA. I think that it was a very material consideration, that you were justified in considering. Now, as I understood your proposition, it was simply to do logging. You did not desire to do any sawing for the Government, did you?

Mr. CHINN. No.

Mr. LEA. So that it was immaterial to you where the mill was, or who sawed it? I understood Mr. Frear to question the witness on the assumption that it involved sawing, and it was simply to clear that point that I asked this question.

Mr. CHINN. I do not remember that Mr. Frear thought it included the sawing.

Mr. LEA. I assumed that.

Mr. FREAR. No.

Mr. LEA. This clears it up. It was simply a proposition that you proposed to do the logging.

Mr. CHINN. Just the logging.

Mr. FREAR. This was my question: That the Siems-Carey-Kerbaugh contract is one of \$25,000,000 for 250,000,000 fitches.

Mr. CHINN. Yes.

Mr. FREAR. Within a period of 18 months. It is irrespective of whether they log or not, and they can get the logs from anywhere.

Mr. CHINN. Yes.

Mr. FREAR. Provided they carry out their contract.

Mr. CHINN. That was my understanding.

Mr. FREAR. And they could get their logs from whoever they chose.

Mr. LEA. The only part they released was the logging operation, which it was proposed you people should take over.

Mr. CHINN. I believe that is the situation.

Mr. LEA. So the situation is that while you agreed as a general proposition on doing this without compensation when you learned the responsibility that would have to be assumed, you did not feel that you could afford to do it.

Mr. CHINN. The main consideration was the impossibility of undertaking what Siems and Carey had undertaken.

Mr. LEA. It was too serious an operation to hastily form a corporation and handle a thing of that proportion within the limited time.

Mr. CHINN. That idea being based upon our belief that selective logging, which is particularly specified in Gen. Disque's first proposal, had to be done, and this amount of timber had to be produced.

Mr. LEA. What is your idea as to the practicability of selective logging?

Mr. CHINN. This is purely a theory, I suppose. I do not think that it is practicable.

Mr. LEA. It is not an economic method of handling logs, is it?

Mr. CHINN. No, sir.

Mr. LEA. It could only be justified on the theory of war emergency.

Mr. CHINN. I think so.

Mr. LEA. What are your particular duties in reference to the manufacturing company with which you are associated? You are connected with a mill, are you not?

Mr. CHINN. No, sir.

Mr. LEA. I misunderstood you.

Mr. CHINN. No; I simply log. This northwest is a little bit different from any other lumbering district, I think, in the United States, in so far as the logging operations and the milling operations, to a large extent, are conducted absolutely separately one from the other.

Mr. LEA. I see.

Mr. CHINN. The logs are logged, the timber, usually not by the logger, put into a common market such as Puget Sound, and towed

to the different destinations, where they are sold to the sawmills who cut them up and market the lumber. That distinction, I believe, is one which you should remember.

Mr. LEA. The reason you did not furnish any spruce to the Government during the war was simply because you were not logging in a spruce section.

Mr. CHINN. That is correct.

Mr. LEA. If you had had spruce there was nothing to prevent your getting a market from the Government of all you had, was there, or any other logger?

Mr. CHINN. No; not that I know of.

Mr. LEA. There was no limit on the amount that would be received at any time during the war?

Mr. CHINN. Not that I know of. I think the main feature was that it was short and they wanted all they could get of the desired quality.

Mr. LEA. And it was more practicable for the logging men to produce the logs where they were carrying on their operations than it was to leave their own scene of operations and go off some place else to operate.

Mr. CHINN. It was. The only thing was the fact that he might be commandeered, as suggested in a letter.

Mr. LEA. And then he would have his forest subjected to selective logging, which was objectionable, I presume, to every logger, wasn't it?

Mr. CHINN. Well, the reason that he would be commandeered would be because his forest contained no essential material and, therefore, they would probably lay idle until he returned to his original occupation.

Mr. LEA. He would be compelled to abandon his operations?

Mr. CHINN. Absolutely.

Mr. LEA. Were you in any danger of that?

Mr. CHINN. I do not produce any spruce. I produced shipbuilding timbers, that is, logs that were cut for timbers.

Mr. LEA. So you were performing a service for the Government during the war?

Mr. CHINN. I would think so.

Mr. LEA. About what is the capacity of your logging operations as conducted last year?

Mr. CHINN. The capacity is about 20,000,000 feet a year. Last year I think we got in about 16,000,000 or 18,000,000.

Mr. LEA. In figuring on the cost of a railroad I believe you said 60-pound rails.

Mr. CHINN. Yes.

Mr. LEA. How much are they selling for now?

Mr. CHINN. Sixty-pound is selling for, I think, about \$60 a ton.

Mr. LEA. New or secondhand?

Mr. CHINN. That is relayers, I believe.

Mr. LEA. That is the coast market, is it?

Mr. CHINN. Just about.

Mr. LEA. Do you know about what the new price is?

Mr. CHINN. For new rails?

Mr. LEA. Yes.

Mr. CHINN. No; I do not.

Mr. LEA. There are approximately 105 tons to the mile, are there not?

Mr. CHINN. It varies with the weight per yard.

Mr. LEA. That is, of 60-pound rail?

Mr. CHINN. I do not know. I guess—

Mr. LEA. Well, you are going to put those in your figures, anyway, that you are going to hand in?

Mr. CHINN. Yes.

Mr. LEA. And you will estimate those separately—the rails and the ties?

Mr. CHINN. Yes.

Mr. LEA. And the small metal to go with the rails?

Mr. CHINN. Yes.

Mr. LEA. If you please.

Mr. CHINN. Spikes, etc.; yes, sir.

Mr. LEA. In what way did you find that the Siems-Carey-Kerbaugh people were violating the wage schedule?

Mr. CHINN. By reports coming to our employment office through men who had worked there largely.

Mr. LEA. Did you make any investigation of that to find out to what extent the schedule had been violated?

Mr. CHINN. Yes.

Mr. LEA. How specifically did you find out the facts?

Mr. CHINN. We had our employment manager inquire of these men and get their statements of the wages received on the Siems-Carey work.

Mr. LEA. And about how many men did you interview or get statements from?

Mr. CHINN. We did not get a great many. These instances came up singly and in small groups, and these were reported.

Mr. LEA. But, as near as you can place it, about how many men were there that made reports?

Mr. CHINN. Ten or fifteen, I guess, as I remember it.

Mr. LEA. Do you remember about what date the first plans were made?

Mr. CHINN. No; I do not.

Mr. LEA. Did you temporarily stop that practice or not?

Mr. CHINN. Of getting these complaints?

Mr. LEA. Yes.

Mr. CHINN. Yes; we did, altogether.

Mr. LEA. The complaints ceased?

Mr. CHINN. No; we stopped getting them.

Mr. LEA. Oh, I see. You don't know whether they did continue to violate it or not.

Mr. CHINN. We think they did.

Mr. LEA. You haven't the specific information on that?

Mr. CHINN. No, any more than the experience of general loggers who complained continually during the operation of the Siems-Carey contract.

Mr. LEA. With whom did you take up the matter?

Mr. CHINN. Maj. Sawyer.

Mr. LEA. Who is he?

Mr. CHINN. He had an office in the Smith building, and I think he represented the Government, or the Spruce Production Division, on the Siems-Carey contract. That is my understanding.

Mr. LEA. Was this railroad work or logging work about which the complaint was made?

Mr. CHINN. My recollection is that it was both.

Mr. LEA. What did Maj. Sawyer say?

Mr. CHINN. He said he would take it up and that the practice would be stopped, and I am sure he endeavored in every possible way to see that it was.

Mr. LEA. You believe he acted in good faith?

Mr. CHINN. Yes, absolutely.

Mr. LEA. Now, why did you want the Siems-Carey contract cancelled?

Mr. CHINN. Well, one reason was that we thought there was already sufficient machinery in the Northwest here to produce all the raw material that was necessary for the Government's requirements, and that, as suggested in Gen. Disque's letter, to have new equipment manufactured and put into service would exist to our detriment after the war. And to make that clear to you I would say that during the period of ten years prior to the war the one disturbing element in this market here was the fact that we continually overproduced because there was too much capacity here.

Mr. LEA. So it would be really better for the industry not to be oversupplied?

Mr. CHINN. Yes. We always had been oversupplied, and the consequence was that our resource was being wasted without bringing commensurate return to the State of Washington and the owners of the property.

Mr. LEA. To a certain extent there was a conflict of interest between the Siems-Carey people and the other loggers, wasn't there? I do not mean in any dishonorable sense at all.

Mr. CHINN. Well, the conflict as to what?

Mr. LEA. With the prospect of being competitors, you might say, in the market. They were to a degree interlopers in an industry to which they were strangers.

Mr. CHINN. I would think that expressed it.

Mr. LEA. I think that is all.

Mr. MAGEE. Now, I want to get clearly in my mind this right of cancellation provision of the contract to which you objected. Did you object because this right of cancellation was in the Siems-Carey-Kerbaugh Corporation?

Mr. CHINN. I do not know that I get you just clearly.

Mr. MAGEE. You said you objected to the cancellation provision in the contract. What I wanted to get at was whether or not the loggers would object to a cancellation provision in a contract with the Government?

Mr. CHINN. I do not think so.

Mr. MAGEE. That is what I wanted to get at. Now, will you state whether that was the point of objection to the cancellation provision; was it that instead of the power to cancel the contract being in the Government—

Mr. CHINN. Yes, sir.

Mr. MAGEE. Under the contract which was offered to you the power of cancellation would be in the Siems-Carey-Kerbaugh Corporation?

Mr. CHINN. Yes, sir.

Mr. MAGEE. I do not assume that the loggers, from the impression I get here, would have objected to entering into a contract where the Government had the power of cancellation of the contract.

Mr. CHINN. I do not think so.

Mr. MAGEE. Now, as I understand from your testimony, you contend that there were sufficient mills upon the coast functioning, and sufficient machinery in those mills and available, to produce all the spruce that the Government could possibly need in the production of airplanes, is that right?

Mr. CHINN. I believe that to be true; yes, sir.

Mr. MAGEE. And that your position is if the Government did not or could not make satisfactory arrangements with the mills here it had the power to commandeer the properties and operate them just exactly as it saw fit.

Mr. CHINN. Yes, sir.

Mr. MAGEE. Is that right?

Mr. CHINN. That is right.

Mr. MAGEE. And that consequently no necessity existed at all to bring in a corporation composed of persons from States far distant, and the creation of a new corporation to come in here and run an organization entirely independent of the mills upon the coast and the men who operated them and who were familiar, from their own experience, with the industry?

Mr. CHINN. That is our position exactly.

Mr. CHINN. The same thing applies to equipment that does to mills, Mr. Frear.

Mr. FREAR. What is it?

Mr. CHINN. The same thing applies to logging equipment that does to mills.

Mr. FREAR. That is, with your knowledge, state whether or not you believe that the loggers, as well as the mills, could have supplied all the products that would have been necessary provided you had had the same opportunities that were given to these people who were brought in here.

Mr. CHINN. Yes.

Mr. FREAR. That is, you were given the extra employment of the 28,000 men and you were given all the priorities and the special advantages that were given to these people who were given the special contracts?

Mr. CHINN. Yes, sir.

Mr. FREAR. That is all.

Mr. LEA. Well, now, you may have misunderstood my question, but I intended it to apply to the contract as finally offered by the Government, in which they offered to deal directly with the loggers, and which contained a cancellation provision. Now, to that provision did you have any objection?

Mr. CHINN. I don't understand that the Government ever made us such a proposition.

Mr. LEA. As I understand from the correspondence read here, the agreement was to cancel the Siems-Carey-Kerbaugh contract so far

as the logging was concerned and to give it all to you folks. Now, that contract would carry a cancellation provision. Now, when that was turned over to the Government did you then have any objection to that feature of it?

Mr. CHINN. I haven't that file here. If I could have it, I think we could read Gen. Disque's letter and get the exact wording of that feature. The stenographer has it.

Mr. LEA. However, if that was the situation, that feature would not be objectionable, assuming that the Government would exercise the right?

Mr. CHINN. The letter, I believe, states that Siems-Carey-Kerbaugh would have the right to cancel—

Mr. LEA. That is the first negotiation, yes; but the second, as I understand it, would leave the right to the Government to exercise it?

Mr. CHINN. Possibly so.

Mr. LEA. They didn't ask you to assume any responsibility that was not assumed by the Siems-Carey-Kerbaugh Co. in their contract, did they? I am not finding any fault, understand. I don't blame you for taking the course you did.

Mr. CHINN. I don't know that they did.

Mr. LEA. I don't understand that they did, but they made you practically the same proposition, and there were reasons that I can readily see why you would not want to assume that responsibility. That is all.

Mr. FREAR. Let me inquire and see if you are right. Whereabouts, in any of the contracts, do you find a provision that the Siems-Carey-Kerbaugh Co. were required to log 500,000,000 feet of logs in one year?

Mr. CHINN. I never have seen it.

Mr. FREAR. There is not any such contract, is there?

Mr. CHINN. Not that I know of.

Mr. FREAR. That was the contract that was offered to you by Col. Disque?

Mr. CHINN. Yes.

Mr. FREAR. And Col. Disque was the Government here, wasn't he?

Mr. CHINN. Yes, sir.

Mr. FREAR. So that when you talk about dealings with the Government constantly, it means dealing with Col. Disque, doesn't it?

Mr. CHINN. He was their representative here.

Mr. FREAR. And there was no condition of cancellation suggested in that contract; it was the suggestion of the impossibility of execution itself to you, wasn't it?

Mr. CHINN. That was our point.

Mr. FREAR. And that 500,000,000 had been the only one that was offered to you, outside of the cancellation—

Mr. CHINN. Yes.

Mr. LEA. Yes; but that contract required 250,000,000 flitches, which meant 500,000,000 logs, so Siems-Carey-Kerbaugh had assumed that responsibility.

Mr. FREAR. By what witness have we had evidence yet that will show that 250,000,000 feet of flitches in 18 months means 500,000,000 feet of logs in 12 months?

Mr. LEA. I say, one of the witnesses this morning testified that.

Mr. CHINN. I think you have that, possibly, in the record. At any rate, Mr. Scott would probably be a good witness, if satisfactory—whom you had here this afternoon.

Mr. FREAR. What we had this afternoon, I think, was in reference to—well, this morning, it was a different proposition I had in mind.

Do you know the relation between these flitches and the logs?

Mr. CHINN. I think Mr. Lightner can explain that to you.

Mr. FREAR. Well.

Mr. LEA. I think he did explain this morning.

Mr. FREAR. Well, I guess that is all.

Mr. LIGHTNER. That is—

Mr. FREAR. We will just ask Mr. Lightner.

Mr. LIGHTNER. That is right—if you study that little paper I gave this morning, it is right in there, on the actual experience.

Mr. FREAR. What is the—

Mr. LIGHTNER. I think, 35 per cent, if I remember correctly, of the No. 1 logs, they get flitches out of.

I said this morning I thought it would take about a billion feet to produce that, to fill that contract—a billion feet of logs. Mr. Scott says 750, I believe.

Mr. FREAR. Seven hundred and fifty million.

Mr. LEA. That is a question of the quality of the log, I presume.

Mr. SCOTT. Yes.

TESTIMONY OF MR. L. G. HORTON.

(The witness was sworn by Mr. Frear.)

Mr. MAGEE. Where do you reside, Mr. Horton?

Mr. HORTON. Seattle.

Mr. FREAR. What is your business?

Mr. HORTON. I am a logger.

Mr. MAGEE. Have been, I presume, for a long time?

Mr. HORTON. We have been logging about four years; conducted a mill before that here.

Mr. MAGEE. I wanted to ask you particularly about that conversation between Col. Disque and the gentlemen mentioned by Mr. Chinn, in which Mr. Chinn stated that you were one of the directors and present at that meeting.

Mr. HORTON. Yes, sir; I was.

Mr. MAGEE. Where was that meeting held?

Mr. HORTON. In Portland in the Yeon Building.

Mr. MAGEE. About what date?

Mr. HORTON. Well, it was in August. I could not tell you just what date.

Mr. MAGEE. In 1918?

Mr. HORTON. 1918; yes, sir.

Mr. MAGEE. Now, will you go on and state just what Col. Disque said at that meeting in reference to Siems-Carey-Kerbaugh Corporation contracts?

Mr. HORTON. The question came up in regard to logging and the Siems-Carey-Kerbaugh contract, and Col Disque said that the contract was not made by him, but came from Washington.

Mr. MAGEE. Did he state at that meeting that it was entered into at Washington over his head?

Mr. HORTON. Yes, sir; I think that was the expression.

Mr. MAGEE. As stated by Mr. Chinn?

Mr. HORTON. Yes, sir.

Mr. MAGEE. What impression did you get as to whether or not Col. Disque was in favor or against this Siems-Carey-Kerbaugh contract?

Mr. HORTON. Well, I thought he was favorable to it.

Mr. MAGEE. What?

Mr. HORTON. I thought he was favorable to Siems-Carey.

Mr. MAGEE. You got the impression that he was favorable to giving them the contract, or did you get the impression that he was offering some excuse, so far as he was concerned, for the entering into of the contract with Siems-Carey-Kerbaugh Corporation?

Mr. HORTON. Well, I could not say as to that. I could not read the general's mind.

Mr. MAGEE. I am asking what impression you got, if any?

Mr. HORTON. Well, my impression was that he was favorable to the contract with the Siems-Carey.

Mr. MAGEE. Well, then, why should he state that it was entered into at Washington over his head?

Mr. HORTON. Well, that was in reply to questions that came up in reference to our dealing with the Spruce Production Bureau—or Spruce Production Corporation.

Mr. MAGEE. That is all I want to ask him.

Mr. FREAR. Was there anything said about the cancellation of the Siems-Carey-Kerbaugh contract?

Mr. HORTON. I can't recall that there was.

Mr. FREAR. Well, the agreement was to cancel the other contracts, was it?

Mr. HORTON. Yes, sir; I believe that was so.

Mr. FREAR. You don't remember whether there was anything said about this contract, or not?

Mr. HORTON. No, I don't.

Mr. FREAR. That is all.

Mr. LEA. As I understand it, this Siems-Carey-Kerbaugh contract was approved by the authorities at Washington, who, of course, were over the head of Gen. Disque. Did you understand that he was calling attention to that fact, or that he was repudiating that contract?

Mr. HORTON. No, I didn't get that meaning of it. I got this meaning, that the contract was made in Washington and forwarded to Maj. Disque for execution, to be carried out.

Mr. LEA. That is all.

(Thereupon, at 4.40 o'clock p. m., the subcommittee adjourned to meet to-morrow, Saturday, August 23, 1919, at 10 o'clock a. m.)





Stanford University Libraries



3 6105 009 891 453

